INPUT

MARKET FORECAST

Information Systems Outsourcing Market–Europe

1993-1998

Outsourcing Information Systems Programme–Europe

JULY 1993

INFORMATION SYSTEMS OUTSOURCING MARKET

EUROPE, 1993-1998

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INPUT Worldwide

London—17 Hill Street
London W1X 7FB, England
Tel. +71 493-9335 Fax +71 629-0179

Paris—24, avenue du Recteur Poincaré
75016 Paris, France
Tel. +1 46 47 65 65 Fax +1 46 47 69 50

Frankfurt—Sudetenstrasse 9
D-35428 Langgöns-Niederkleen, Germany
Tel. + 6447-7229 Fax +6447-7327

San Francisco—1280 Villa Street
Mountain View, CA 94041-1194
Tel. (415) 961-3300 Fax (415) 961-3966

New York—400 Frank W. Burr Blvd.
Teaneck, NJ 07666
Tel. (201) 801-0050 Fax (201) 801-0441

Washington, D.C.—1953 Gallows Rd., Ste. 560
Vienna, VA 22182
Tel. (703) 847-6870 Fax (703) 847-6872

Tokyo—Saida Building, 4-6, Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101, Japan
Tel. +3 3864-0531 Fax +3 3864-4114

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Abstract

Accelerated by the recession, a fundamental shift has been taking place over the last few years in European companies' attitudes towards outsourcing elements of their IS function.

This shift has led to rapid growth in the outsourcing market and rapid changes in the nature of the outsourcing services provided. For example, the outsourcing of an organisation's IS infrastructure now frequently tends to include desktop services and network management in addition to traditional data centre management.

The market is also becoming very competitive. The major systems vendors and leading U.S. professional services vendors are mounting a serious challenge to the established vendors.

In addition the market is segmenting. A small number of European vendors are establishing their positions as the low cost suppliers of platform operations services. Simultaneously, a number of U.S. professional services vendors are winning major applications operations contracts.

This report tracks these trends in the market and provides outsourcing market forecasts for each European country over the period 1993-1998. These forecasts are broken down to predict the variations in growth between the differing subsectors of the outsourcing market, namely, platform operations, desktop services, network management, applications management and applications operations. Breakdowns of the market by industry sector are also provided, together with the market shares of the leading vendors in each national market.

Researched by
INPUT
17 Hill Street
London W1X 7FB
United Kingdom

Published by
INPUT
1280 Villa Street
Mountain View, CA 94041-1194

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I

Introduction

A

Scope and Objectives

The IS departments of many European organisations are facing challenging times. Senior executives are typically demanding that the IS spending within their organisation be reduced while service levels are maintained or improved. At the same time, dramatic changes in technology, such as client/server architectures, are taking place, opening up new possibilities for information services to contribute to company performance.

Not surprisingly, outsourcing is becoming an increasingly acceptable way of tackling these challenges. Outsourcing offers the benefits of simplified management, reduced costs and access to a wider base of up-to-date technical skills.

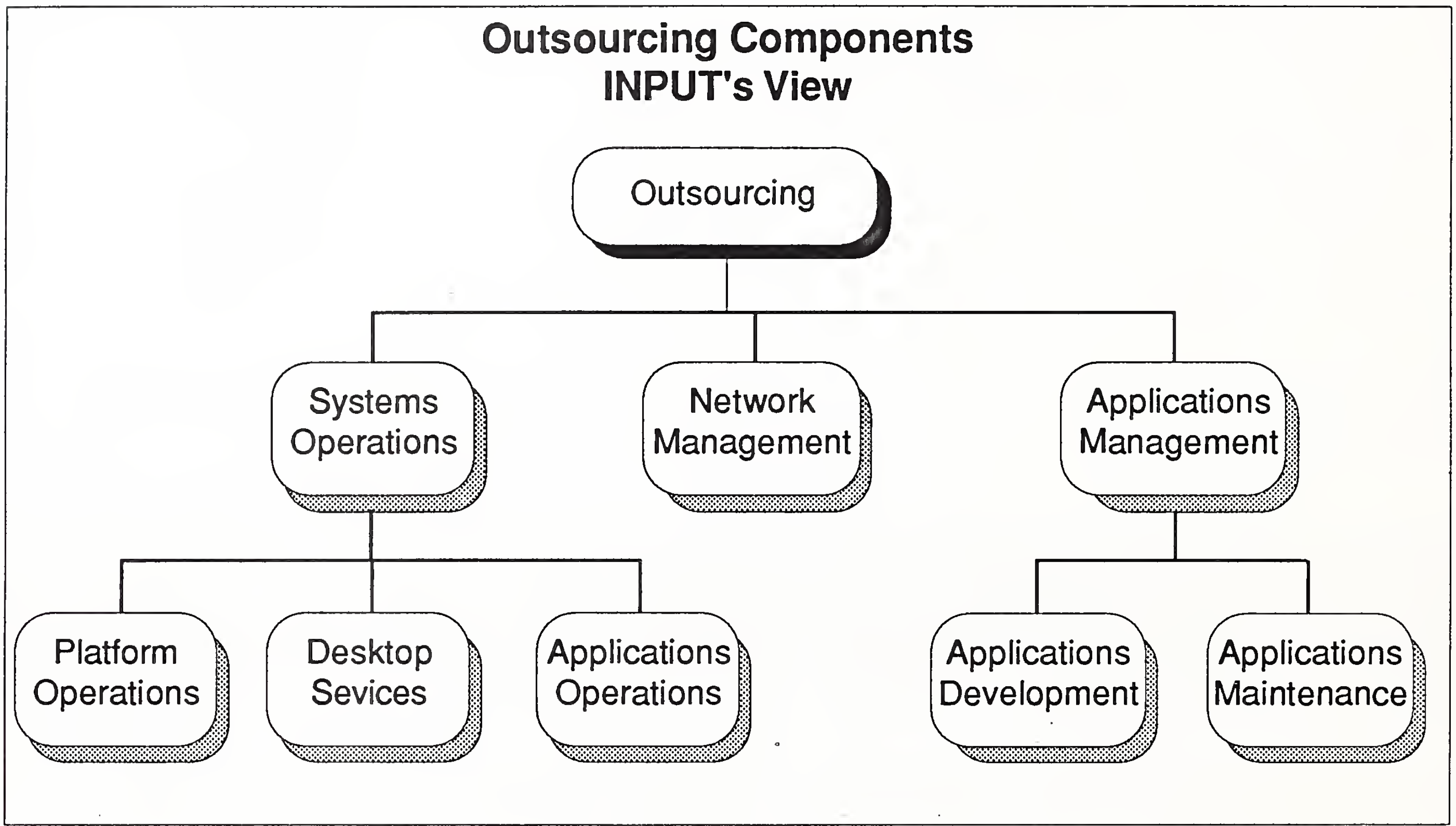
Accordingly, the outsourcing market is showing dramatic growth across Europe. However the market is also becoming much more competitive with a small number of European vendors beginning to dominate the platform operations segment, and vendors such as EDS, Perot Systems and CSC winning large applications operations contracts.

The objectives of this report are:

- To monitor the changes taking place in the market for outsourced services in Europe
- To forecast the size of the outsourcing market by country
- To identify the outsourcing market shares of the leading vendors in each country.

INPUT considers the submodes shown in Exhibit I-1 to be outsourcing-type relationships and in aggregate to represent the outsourcing market.

EXHIBIT I-1



The segments within outsourcing are defined as follows:

Systems Operations - Contracting out, to a vendor, the information systems operations in either of three ways:

- *Platform Systems Operations* - The vendor is responsible for managing the computer systems and their associated networks.

- *Desktop Services* - Contracting out to a vendor for the deployment, maintenance, support and connectivity of the firm's PC/workstation inventory. The service may also include performing the help desk function.

- *Applications Systems Operations* - The vendor is responsible for developing and/or maintaining a client's applications software as well as operating and managing the computer systems and their associated networks.

Network Management - Contracting to a vendor for the operations and management of the computer-related telecommunications network, transmitting data, voice, image, text, local-area and wide-area networks. Voice-only network operations are not part of information systems outsourcing.

Applications Management - The vendor is responsible for the development and maintenance of all the applications systems a client uses to support a business operation.

- *Applications Development* - Contracting out for the design, development, and long-term maintenance and enhancement of new applications software associated with a business operation.

- *Applications Maintenance* - Contracting out for the maintenance of the existing applications software associated with a business operation.

B

Methodology

The research that contributed to this study was derived from three main sources:

- Fifteen in-depth interviews with outsourcing vendors in Europe.

- Information supplied by the outsourcing business units of vendors in response to a questionnaire.

- INPUT's continuous annual analysis of the computer software and services market which includes interviews with both vendors and users.

Additionally INPUT's extensive library and data base of information relating to the software and services industry was utilised.

The forecast data in the Appendixes may differ slightly from that shown in the main report, as a result of differences in rounding.

C

Report Structure

Section II consists of the Executive Overview which is a summary of the key conclusions of the study.

Section III provides an analysis of the European outsourcing market as a whole. This includes market forecasts, industry breakdowns, and the identification of leading vendors.

Section IV provides market forecasts and leading vendor assessments for each individual country market. Industry breakdowns are provided for Europe, France, the United Kingdom and Germany.

D

Related Reports

Information Systems Outsourcing Competitive Analysis—Europe, 1992

Outsourcing Systems Operations—Europe, 1992-1997

Outsourcing Network Management and Operations—Europe, 1992-1997

Outsourcing Desktop Services—Europe, 1992-1997

Outsourcing Applications Management—Europe, 1992-1997

Outsourcing Opportunities in Government—Europe, 1993-1998.

II

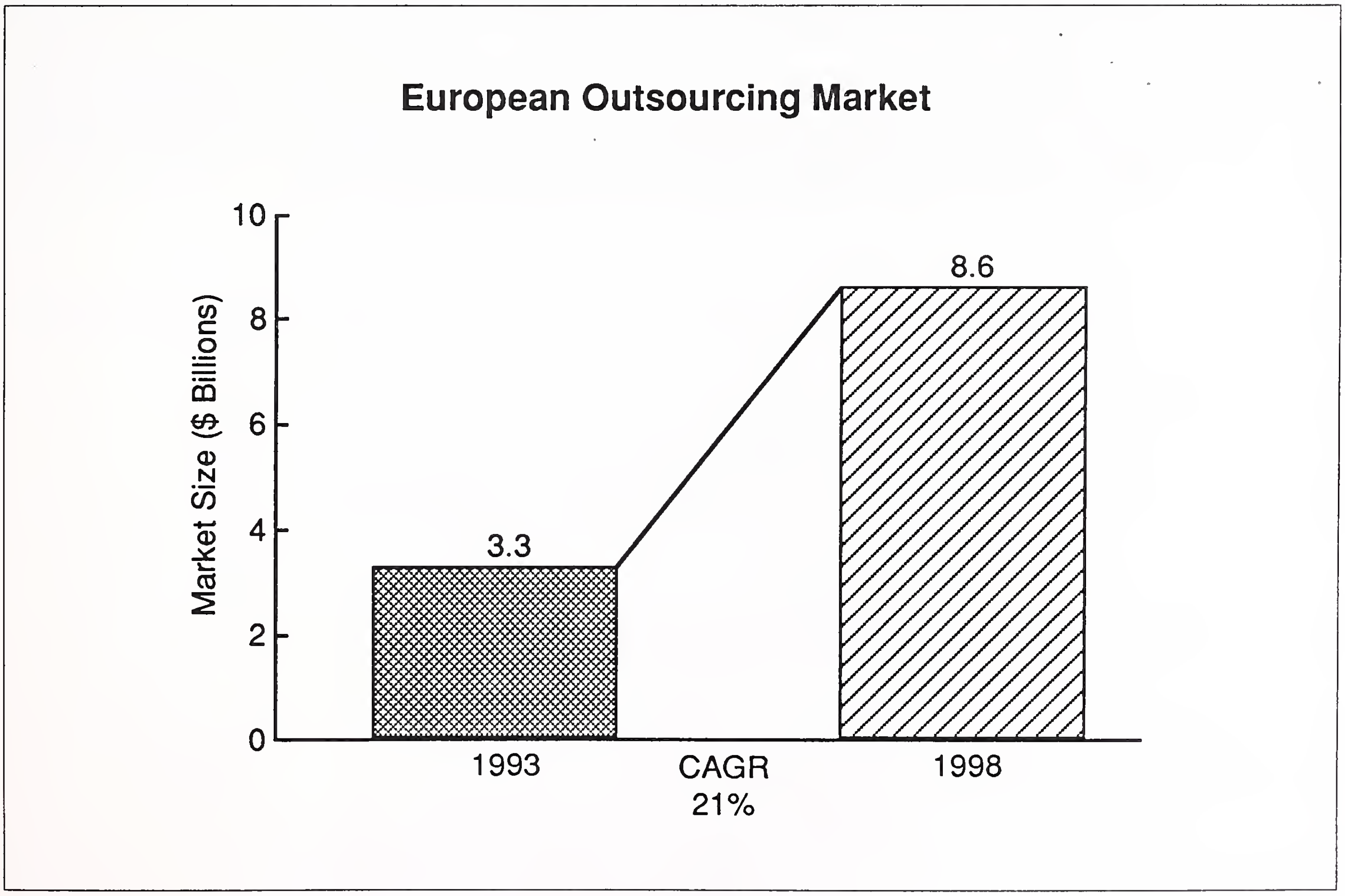
Executive Overview

A

Outsourcing Market Segmentation Poses Challenge for Vendors

The outsourcing market in Europe continues to grow rapidly, and high levels of growth are expected to continue into the future. INPUT's forecast for the European outsourcing market is shown in Exhibit II-1.

EXHIBIT II-1



It is often assumed that high levels of market growth mean an undemanding market where every vendor is profitable and market entry is comparatively simple. However, this is not the case in the European outsourcing market.

The European outsourcing market is segmenting into distinct platform operations and applications operations sectors, each with its own success criteria and dominant vendors. In addition, vendors are facing the challenge of delivering support services to clients operating distributed IS architectures. This segmentation is creating difficulties for vendors offering generalised outsourcing services. To be successful, vendors need to focus on either the platform operations or the applications operations segment.

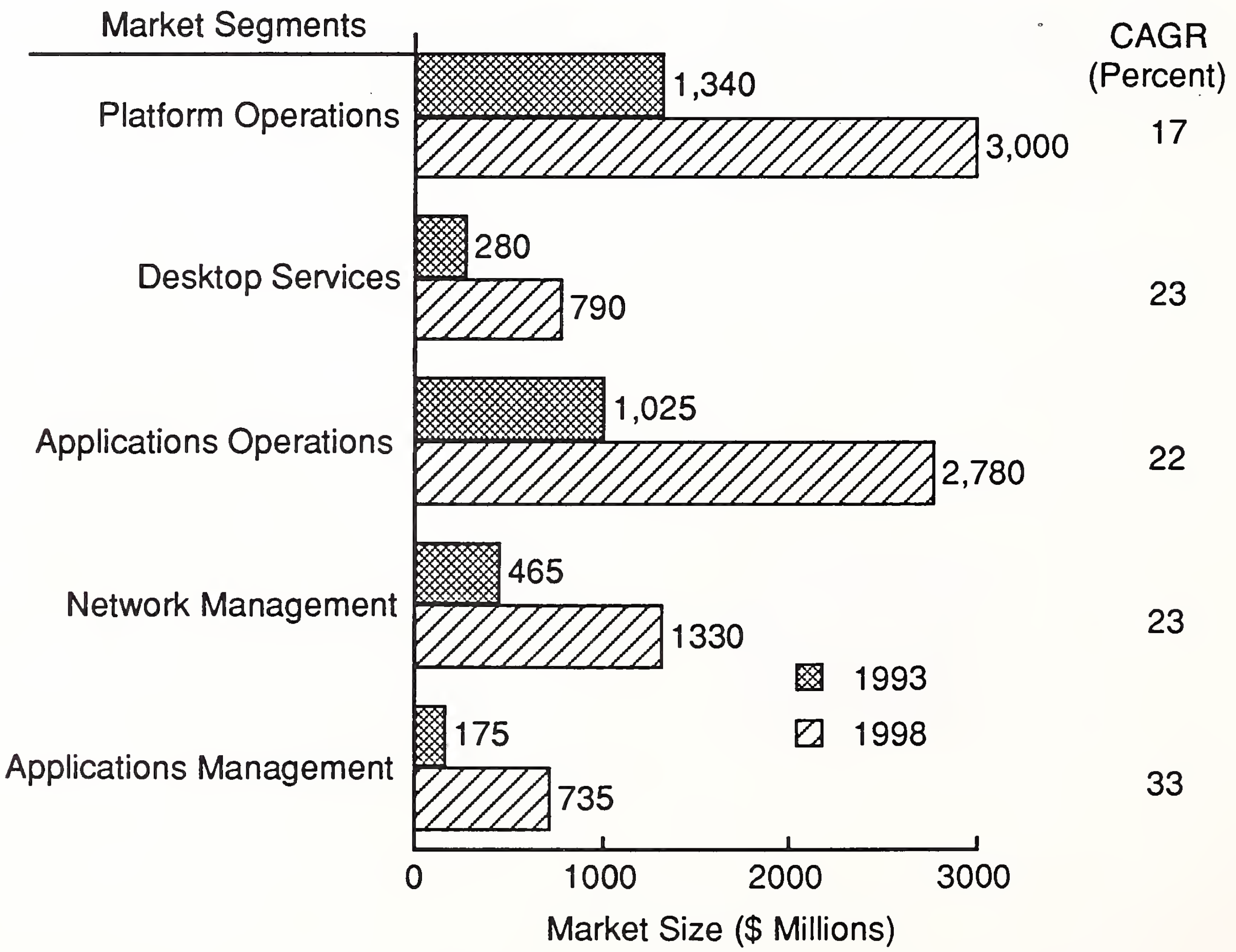
B

Platform Operations Market Becomes Extremely Competitive

Exhibit II-2 shows the forecast growth in the outsourcing market by market segment.

EXHIBIT II-2

Principal Market Segments, 1993-1998



The platform operations segment is forecast to show the lowest growth over the next five years. It is also an extremely competitive market, now becoming dominated by a small number of vendors in each country. Throughout Europe, the platform operations segment offers very low margins, particularly in the early years of contracts. This market is becoming a very challenging one for vendors as a small number of vendors drive down their costs of operation and become very price-competitive. It is necessary for the senior management of these organisations to be content to operate at very low profit margins while their market position/dominance is being established.

For example, in France, Axone has always had a strategy of becoming the low cost producer in the platform operations segment. The company has been successful in this approach, growing rapidly over the last few years. As a result, Axone's pricing is now having a major influence on the market and acting as an effective barrier for new entrants to the platform operations segment in France.

In the U.K., Hoskyns has apparently been operating a similar strategy over the last year. The company won 25 new contracts in 1992 but at very low levels of profitability. Nonetheless, this strategy is creating problems for some of the company's competitors who are having to relinquish their growth strategies in the U.K. outsourcing market.

It is probable that a similar approach is being adopted by debis Systemhaus in Germany. debis Systemhaus is Cap Gemini Sogeti's European centre of excellence for provision of low-cost platform operations services.

C

Applications Operations Segment Dominated by U.S. Suppliers

Exhibit II-3 lists the leading vendors in the European Outsourcing market.

EXHIBIT II-3

Leading Vendors, 1992
Outsourcing, Europe

Company	Estimated Revenues ($ M)
EDS	350
Cap Gemini Sogeti	200
AT&T Istel	160
GSI	110
Finsiel	100
debis Systemhaus	100

The platform operations segment is largely dominated by European vendors such as Hoskyns, a subsidiary of Cap Gemini Sogeti, and debis Systemhaus.

However, vendors of U.S. origin have been particularly successful over the last year in winning major applications operations contracts. While platform operations emphasises cost reduction as the rationale for outsourcing IS functions, applications operations concentrates on demonstrating business value, that is, the increased effectiveness of IS' contribution to business goals once it is outsourced. Applications operations contracts provide the vendor with considerably higher level of profit than platform operations contracts.

The most successful vendors in winning large applications operations contracts over the last year have been EDS, Perot Systems and CSC. Their approach may now be copied by a number of European outsourcing vendors.

D

Desktop Services Delivery Becomes a Key Challenge

INPUT has consistently predicted that outsourcing will develop in three stages:

- Firstly by outsourcing IS infrastructure management such as the operation of data centres
- Secondly by the combination of management by external vendors of both systems development and IS infrastructures
- Thirdly by the outsourcing of complete business functions of which IS is merely a part.

Indeed in Europe, applications operations is forecast to grow more rapidly than platform operations over the next five years as organisations increasingly accept the virtues of outsourcing systems development.

In other instances, the outsourcing of complete business functions (business operations) has also begun. Examples of this include the willingness of many local government authorities in the United Kingdom to outsource their revenue collection, and BP Exploration's outsourcing of its accounting function to Andersen Consulting.

However, many organisations are still at the stage of outsourcing their IS infrastructure management. Even here, there are major changes taking place in the nature of the services outsourced with a decreased emphasis on the outsourcing of mainframe-based data centres and an increased emphasis on the management of corporate networks and desktop services.

As a result these new forms of IS infrastructure management are forecast to grow faster than platform operations over the next five years.

So far this challenge has been most successfully met by the large PC dealers. However the equipment manufacturers are now beginning to address this challenge as are a number of professional services vendors. The ability to supply desktop services and outsourced network management will be a critical factor in retaining current platform operations clients, as they downsize to a client/server environment.

Exhibit II-4 provides a breakdown of the European outsourcing market by region.

EXHIBIT II-4

Competitive Regional Market Sizes Europe, 1993

Region	Market Size ($ Millions)	Percent of European Market
United Kingdom	1,100	34
France	800	24
Germany	360	11
Italy	315	10
Scandinavia	260	8
Benelux	260	8
Spain	70	2
Rest of Europe	110	3
Total (Rounded)	3,280	100

The United Kingdom is the most developed outsourcing market in Europe, and will continue to develop rapidly. This is due to a combination of the depth of the recession which has been experienced in the United Kingdom and the cultural stance taken towards outsourcing. Executives in the United Kingdom have a greater propensity to adopt a core business focus than executives in many other regions of Europe.

The outsourcing market in the United Kingdom is being further stimulated by the pressure on local and central government to implement compulsory competitive tendering and market testing respectively.

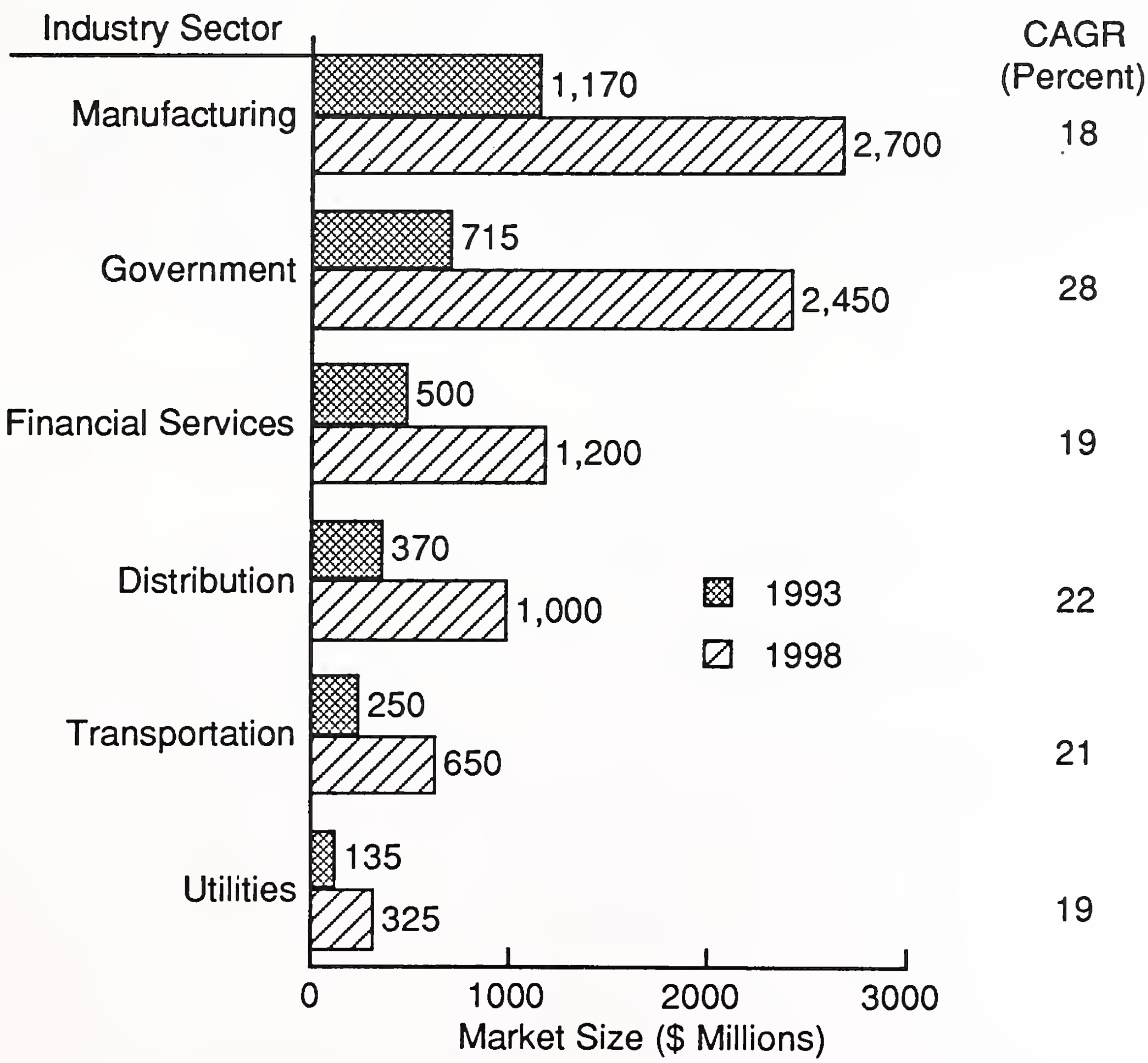
Until recently, outsourcing had received little acceptance in Germany. However, organisations in Germany are now facing more difficult conditions and are taking an increasing interest in exploring outsourcing options. A number of major U.S. outsourcing vendors are also actively targeting Germany. The concept of outsourcing is becoming widely publicised, both by these organisations and German vendors such as debis Systemhaus. Consequently, adoption of outsourcing in Germany is beginning and the German outsourcing market is forecast to accelerate over the next five years.

In Germany, the manufacturing sector is one of the most enthusiastic early adopters of outsourcing.

A forecast of outsourcing within the principal industry sectors is provided for Europe in Exhibit II-5.

EXHIBIT II-5

Principal Industry Sector Markets Outsourcing—Europe, 1993-1998



However, it is important to bear in mind that the adoption of outsourcing by industry varies widely from country to country.

For example, in the United Kingdom and Italy, government—both national and local—is a very important sector. In France, the distribution and transportation sectors have shown a high propensity to adopt outsourcing.

III

Outsourcing Market Maintains High Growth Levels

A

Large Applications Operations Contracts Point to the Future of Outsourcing

The European outsourcing market has matured significantly over the last year. Traditionally the outsourcing markets in the United Kingdom and France have been dominated by mainframe-based platform operations contracts, and outsourcing, in any form other than SAP Outsourcing, has been slow to emerge in Germany.

However there are now signs of the market changing. Outsourcing is starting to become established in Germany, particularly in the manufacturing sector where EDS and debis Systemhaus are both winning contracts. Secondly, a number of large applications operations contracts have been awarded across Europe. These include:

- EDS' $1 billion/10-year contract with KF in Sweden
- CSC's contract with BHS in the United Kingdom
- Perot Systems' contracts valued at $1 billion with Europcar in France and East Midlands Electricity in the United Kingdom.

These deals indicate that the co-sourcing approach practiced by vendors such as EDS is beginning to become more acceptable in Europe.

Accordingly, INPUT forecasts that the structure of the outsourcing market will shift in favour of applications operations over the next five years. This expectation is reflected in the market forecast shown in Exhibit III-1.

EXHIBIT III-1

Outsourcing Market Forecast Europe, 1993-1998

	Market Forecast ($ Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Platform Operations	1,150	1,340	17	3,000
Desktop Services	215	280	23	790
Applications Operations	805	1,025	22	2,780
Network Management	375	465	23	1,330
Applications Management	127	175	33	735
Total (Rounded)	2,700	3,300	21	8,600

Another major trend implicit in this forecast is the expectation that the outsourcing of infrastructure management will gradually switch from platform operations and the management of large mainframe-based data centres to the management of distributed IS architectures. This expectation is shown by the high growth levels forecast for desktop services outsourcing and outsourced network management services.

B

Country Market Breakdowns

Exhibit III-2 provides forecasts for the outsourcing market by country over the period 1993-1998.

EXHIBIT III-2

Outsourcing Country Markets Europe, 1993-1998

	Market Forecast ($ Millions)			
Country	1992	1993	1993-1998 CAGR (%)	1998
France	675	800	21	2,040
Germany	290	360	22	970
United Kingdom	885	1,100	23	3,130
Italy	265	315	20	775
Sweden	72	135	18	310
Denmark	30	37	19	90
Norway	34	40	20	100
Finland	40	48	18	110
Netherlands	138	172	19	410
Belgium	78	90	18	205
Spain	58	70	21	180
Switzerland	46	54	17	117
Austria	18	21	19	50
Portugal	3	3	25	9
Greece	4	4	18	9
Ireland	8	12	25	37
Eastern Europe	10	14	50	105
Total (rounded)	2,700	3,300	21	8,600

Forecasts for each of the subsectors of outsourcing by country are listed in Exhibits III-3 to III-7.

EXHIBIT III-3

Platform Operation Country Markets Europe, 1993-1998

	Market Forecast ($ Millions)			
Country	1992	1993	1993-1998 CAGR (%)	1998
France	285	335	18	760
Germany	97	115	22	315
United Kingdom	420	490	17	1,070
Italy	95	110	17	240
Sweden	38	45	15	90
Denmark	9	11	17	24
Norway	13	16	16	33
Finland	20	23	17	50
Netherlands	57	70	16	145
Belgium	47	53	16	112
Spain	20	23	17	50
Switzerland	22	25	11	42
Austria	6	7	13	13
Portugal	1	1	18	2
Greece	2	2	15	4
Ireland	5	7	19	17
Eastern Europe	5	7	38	35
Total (rounded)	1,150	1,340	17	3,000

EXHIBIT III-4

Desktop Services Country Markets Europe, 1993-1998

Country	Market Forecast ($ Millions)			
	1992	1993	1993-1998 CAGR (%)	1998
France	30	38	28	130
Germany	40	52	21	135
United Kingdom	80	105	23	290
Italy	9	11	26	35
Sweden	8	10	20	25
Denmark	5	7	19	17
Norway	5	6	25	18
Finland	2	3	27	10
Netherlands	23	32	21	82
Belgium	1	1	38	5
Spain	3	3	27	10
Switzerland	3	4	20	10
Austria	3	3	25	9
Portugal	-	1	20	1
Greece	-	0	23	1
Ireland	-	-	-	5
Eastern Europe	1	2	38	10
Total (rounded)	215	280	23	790

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values

EXHIBIT III-5

Network Management Country Markets
Europe, 1993-1998

	Market Forecast ($ Millions)			
Country	1992	1993	1993-1998 CAGR (%)	1998
France	110	135	21	345
Germany	85	100	21	260
United Kingdom	95	120	26	375
Italy	28	37	26	117
Sweden	7	10	28	35
Denmark	3	3	27	10
Norway	3	4	27	13
Finland	4	5	25	15
Netherlands	11	14	23	40
Belgium	3	4	22	11
Spain	14	18	25	55
Switzerland	5	6	31	23
Austria	3	4	28	14
Portugal	1	1	32	4
Greece	-	1	15	2
Ireland	2	2	20	5
Eastern Europe	1	2	38	10
Total (rounded)	375	465	23	1,330

EXHIBIT III-6

Applications Operations Country Markets Europe, 1993-1998

Country	Market Forecast ($ Millions)			
	1992	1993	1993-1998 CAGR (%)	1998
France	220	255	19	610
Germany	65	80	22	220
United Kingdom	250	330	27	1,090
Italy	120	135	19	325
Sweden	13	65	16	135
Denmark	11	13	18	30
Norway	11	12	20	30
Finland	14	16	17	35
Netherlands	32	37	17	82
Belgium	25	30	18	68
Spain	18	20	19	47
Switzerland	14	17	14	33
Austria	5	6	13	11
Portugal	1	1	15	2
Greece	1	1	15	2
Ireland	2	3	27	10
Eastern Europe	3	5	58	50
Total (rounded)	805	1,025	22	2,780

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values

EXHIBIT III-7

Applications Management Country Markets
Europe, 1993-1998

Country	Market Forecast ($ Millions)			
	1992	1993	1993-1998 CAGR (%)	1998
France	30	38	38	190
Germany	8	15	25	45
United Kingdom	40	55	40	300
Italy	15	20	25	60
Sweden	6	8	25	24
Denmark	3	3	27	10
Norway	2	3	22	8
Finland	1	1	25	3
Netherlands	14	20	26	63
Belgium	2	3	22	8
Spain	3	5	25	15
Switzerland	2	2	25	6
Austria	1	1	25	3
Portugal	-	-	-	-
Greece	-	-	-	-
Ireland	-	-	-	-
Eastern Europe	-	-	-	-
Total (rounded)	127	175	33	735

C

Industry Sector Breakdown Varies Dramatically by Country

Exhibit III-8 shows the current breakdown of the European outsourcing market by industry, while Exhibit III-9 forecasts the growth in the market by industry sector.

EXHIBIT III-8

Industry Sector Breakdown, 1992
Outsourcing, Europe

Industry Sector	Market Size ($ Millions)	Proportion (Percent)
Government	435	16
Manufacturing	1,040	39
- Discrete	610	23
- Process	430	16
Financial Services	485	18
- Banking & Finance	325	12
- Insurance	160	6
Distribution	300	11
Transportation	230	9
Utilities	110	4
Other	100	4
Total	2,700	100

EXHIBIT III-9

Industry Sector Market, 1993-1998
Outsourcing, Europe

Industry Sector	1993 $ M	1998 $ M	1993-1998 CAGR (%)
Government	715	2,450	28
Manufacturing	1,170	2,700	18
- Discrete	700	1,500	16
- Process	470	1,200	21
Financial Services	500	1,200	19
- Banking and Finance	345	800	18
- Insurance	155	400	21
Distribution	370	1,000	22
Transportation	250	650	21
Utilities	135	325	19
Other	160	275	11
Total	3,300	8,600	21

However, there is as yet no uniform pattern of adoption of outsourcing by industry across Europe. In France, the distribution and transportation sectors are especially important sources of outsourcing contracts. In the U.K., the utilities sector has been a major source of outsourcing contracts, driven by the move to privatisation, while the government sector will be particularly important over the next five years. In Germany, the manufacturing sector is leading the drive to adopt outsourcing. In Italy the most important sectors for outsourcing contracts are the public sector and the financial services sector.

Exhibit III-10 list the leading outsourcing vendors in Europe at end 1992.

Many of these vendors are profiled in INPUT's report *Information Systems Outsourcing Competitive Analysis*.

EXHIBIT III-10

Leading Outsourcing Vendors
Europe, 1992

Rank	Company	Estimated Market Share (%)	1992 Estimated Revenue ($ Millions)
1	EDS	13	350
2	Cap Gemini Sogeti	7	200
3	AT&T Istel	6	160
4	GSI	4	110
5 =	Finsiel	4	100
5 =	debis Systemhaus	4	100
7	Sema Group	4	95
8	Digital	3	90
9	CSC	3	80
10	IBM	3	70
	Total Listed	51	1,355
	Total Market	100	2,700

Over the last year, there has been considerable competitive maneuvering within the European outsourcing market. The main trends have been:

- Increased activity by the major U.S. outsourcing vendors
- Increased activity by the leading systems vendors.
- The development of increased geographic coverage by the leading European outsourcing vendors.

Major U.S. outsourcing companies have achieved a measure of success in the European outsourcing market over the past year with:

- Computer Sciences Corporation (CSC) winning a major contract with Ideal Standard in Germany.
- Perot Systems winning major contracts worth a total of $1 billion with East Midlands Electricity in the U.K. and Europcar in France.
- EDS signing a $1 billion contract with KF in Sweden.

The leading systems vendors—such as IBM, Digital, Groupe Bull, and Unisys—are also developing their outsourcing activities across Europe. For example, IBM has won contracts with Equifax and National Starch and Chemical.

These vendors are particularly strong in platform operations. In addition, both IBM and Digital are keen to promote their network management capabilities and Digital their desktop services capabilities.

With increased penetration of the European outsourcing market by major U.S. outsourcing vendors and by the systems vendors, the indigenous vendors are endeavouring to widen their sphere of influence within Europe. For example, Cap Gemini Sogeti is actively seeking to develop a pan-European outsourcing capability, while AT&T Istel acquired Dataid. Mergers or partnerships involving other leading players are likely to take place over the next few years.

IV

Country Markets

A

Axone Takes Aggressive Stance in France

Axone is now a wholly owned subsidiary of IBM following IBM's purchase of Sema Group's shareholding. Axone continued to show dramatic growth in the French outsourcing market in 1992, with estimated growth of 33%. The company's strategy depends on driving down the cost curve and providing a very price-competitive platform operations service. This approach, like that of Cap Gemini Sogeti/Hoskyns in the United Kingdom, is causing difficulties for other vendors who are trying to enter or increase their market share in the platform operations market.

Exhibit IV-1 provides a forecast of the outsourcing market in France.

EXHIBIT IV-1

Outsourcing Market—France, 1993-1998

	Market Forecast (FF Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	1,500	1,750	18	4,000
- Desktop Services	155	200	28	690
- Applications Operations	1,170	1,350	19	3,200
Total Systems Operations	2,825	3,300	19	7,900
Network Management	575	700	21	1,800
Applications Management	150	200	38	1,000
Total Outsourcing	3,550	4,200	21	10,700

The desktop services market is forecast to show considerable growth in France over the forecast period as PC LANs take on a more critical role in organisations' IS infrastructures.

A breakdown of the outsourcing market by industry for 1992 is shown in Exhibit IV-2, and Exhibit IV-3 provides a forecast by industry sector.

EXHIBIT IV-2

Outsourcing, Industry Sector, Market Analysis France, 1992

Industry Sector	Market Size (FF Millions)	Percent
Manufacturing	1,350	38
- Discrete	820	23
- Process	530	15
Distribution (Wholesale & Retail)	710	20
Transportation	570	16
Financial Services	530	15
- Banking & Finance	360	10
- Insurance	170	5
Government	180	5
Other	210	6
Total	3,550	100

EXHIBIT IV-3

Outsourcing Market Forecast, 1993-1998
Industry Sectors, France

Sector	1993 (FFm)	1998 (FFm)	CAGR (Percent)
Manufacturing	1,500	3,500	18
- Discrete	920	2,100	18
- Process	580	1,400	19
Distribution (Wholesale & Retail)	820	2,100	21
Financial Services	580	1,230	16
- Banking & Finance	390	850	17
- Insurance	190	380	15
Government	430	1,600	30
- Local Government	430	1,100	21
- National Government	-	500	-
Transportation	650	1,700	21
Other	220	570	21
Total	4,200	10,700	21

In France, the distribution and transportation sectors have been especially strong outsourcing markets over the last two years. For example, GSI has been particularly successful in the hypermarket sector with contracts with organisations such as Arlaud and Carrefour.

The government sector has so far shown few opportunities for outsourcing vendors. However, this may now start to change as the new government evaluates the benefits of outsourcing IS activities within government departments.

The financial services sector makes considerable use of processing services such as card processing and funds transfer from vendors such as Sligos and Axime. However, the financial services sector still exhibits a low level of propensity to adopt outsourcing services such as platform operations and applications operations.

The leading outsourcing vendors in France are listed in Exhibit IV-4.

EXHIBIT IV-4

Leading Outsourcing Vendors—France, 1992

Rank	Company	Estimated Market Share (Percent)	1992 Estimated Revenue (FF Millions)
1	EDS-GFI	21	750
2	GSI	10	350
3	Télésystèmes	8	280
4	IBM/Axone	7	240
5	CISI	6	200
6	France Télécom	5	180
7	AT&T Dataid	5	165
8	Sligos	4	150
9	Axime	3	90
10	Cap Gemini Sogeti	2	80
	Total Listed	70	2,485
	Total Market	100	3,550

EDS retains leadership of the French outsourcing market following the company's acquisition of GFI. The strategy adopted by EDS-GFI in the outsourcing market will more closely resemble that of EDS than GFI, with an emphasis on profitable co-sourcing contracts rather than price-competitive platform operations contracts. This is a very different approach to that taken by Axone.

B

Outsourcing Becomes Established in Germany

The outsourcing market—SAP outsourcing excepted—has been slow to become established in Germany. However, in 1992, outsourcing began to become established as debis Systemhaus and EDS achieved notable successes.

Exhibit IV-5 provides a forecast of the outsourcing market in Germany.

EXHIBIT IV-5

Outsourcing Market—Germany, 1993-1998

	Market Forecast (DM Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	150	180	22	485
- Desktop Services	60	80	21	210
- Applications Operations	100	125	22	340
Total Systems Operations	310	385	22	1,035
Network Management	130	155	21	400
Applications Management	12	23	25	70
SAP Outsourcing	400	470	15	945
Total Outsourcing (rounded)	850	1,030	19	2,450

Outsourcing in Germany can be considered to take two forms. Firstly, there is outsourcing of the type defined by INPUT, including systems operations, network management and applications management. Secondly, there is SAP Outsourcing which, according to INPUT classification, is a processing service. Historically, SAP Outsourcing has been concerned with providing access to SAP software to small to medium-sized organisations which could not afford to purchase a mainframe to run the R/2 application software product. The nature of SAP Outsourcing may now start to change with the introduction of the Unix-based R/3 product as a replacement for R/3.

A breakdown of the total outsourcing market—including SAP outsourcing—by industry for 1992 is shown in Exhibit IV-6. Exhibit IV-7 provides a forecast by industry sector.

EXHIBIT IV-6

Outsourcing, Industry Sector, Market Analysis Germany, 1992

Industry Sector	Market Size (DM Millions)	Percent
Manufacturing	425	50
- Discrete	270	32
- Process	155	18
Financial Services	195	23
- Banking & Finance	105	12
- Insurance	90	11
Distribution (Wholesale & retail)	70	8
Utilities	25	3
Other	135	16
Total	850	100

EXHIBIT IV-7

Outsourcing Market Forecast, 1993-1998
Industry Sector, Germany

Sector	1993 (DMm)	1998 (DMm)	CAGR (Percent)
Manufacturing	515	1,230	19
- Discrete	335	800	19
- Process	180	430	19
Financial Services	240	520	17
- Banking & Finance	130	285	17
- Insurance	110	235	16
Distribution (wholesale & retail)	85	220	21
Utilities	30	80	22
Other	160	400	20
Total	1,030	2,450	19

Both outsourcing and SAP outsourcing are firmly estalished in the manufacturing sector. The German manufacturing inudustry is facing a recession in its home market combined with growing international competition from U.S. and Japanese manufacturers. In particular, Japanese companies are beginning to enter the upmarket segments where German manufacturing industry has been especially successful.

The resulting need to reduce costs is leading many German manufacturing companies to reconsider their attitudes towards outsourcing. This trend is expected to continue throughout the forecast period.

The second most promising sector for outsourcing vendors is financial services. For example, Alldata has achieved a measure of success in targeting medium-sized insurance companies.

The leading outsourcing vendors in Germany are listed in Exhibit IV-8. The revenues shown here include revenues derived from both SAP outsourcing and INPUT's definition of outsourcing.

EXHIBIT IV-8

Leading Outsourcing Vendors Germany, 1992

Rank	Company	Estimated Market Share (Percent)	1992 Estimated Revenue (DM Millions)
1	debis Systemhaus	19	160
2	Alldata	12	100
3	EDS	11	95
4	tds	4	35
5	AC Service	4	30
6	Digital	3	25
7	Fiducia/Orga	2	20
8	Taylorix	2	15
9	Info AG	1	10
10	CSC	1	10
	Total Listed	59	500
	Total Market	100	850

Many of the vendors listed in Exhibit IV-8 specialise in SAP Outsourcing. These vendors include:

- tds
- AC Service
- Fiducia/Orga
- Taylorix
- Info AG.

Alldata and debis Systemhaus also provide SAP Outsourcing services. However, Alldata has been successful in offering outsourcing services to the financial services sector, and debis Systemhaus is Cap Gemini Sogeti's centre of competence specialising in low-cost platform operations services.

C

United Kingdom Moves to Next Outsourcing Wave

Exhibit IV-9 provides the outsourcing forecast for the United Kingdom.

EXHIBIT IV-9

Outsourcing Market—United Kingdom, 1993-1998

	Market Forecast (£ Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	265	310	17	680
- Desktop Services	50	65	23	185
- Applications Operations	160	210	27	700
Total Systems Operations	475	585	22	1,570
Network Management	60	75	26	240
Applications Management	25	35	40	190
Total Outsourcing (rounded)	560	700	23	2,000

In the United Kingdom, there are signs that the growth in the platform operations segment is slowing down. Vendors such as Hoskyns and Data Sciences who have been particularly strong in platform operations are showing reduced growth. Simultaneously a number of major applications operations contracts have been signed. Examples include the retailer BHS' contract with CSC and East Midlands Electricity's contract with Perot Systems.

Organisations in the United Kingdom are beginning to view outsourcing not just as a means of cost reduction but more importantly as a way of refreshing their IS systems.

Hence INPUT forecasts that the applications operations segment of the outsourcing market will outgrow platform operations over the forecast period. Indeed applications operations will become the dominant component of the systems operations market by 1998.

A breakdown of the outsourcing market by industry for 1992 is shown in Exhibit IV-10, and Exhibit IV-11 provides a forecast by industry sector.

EXHIBIT IV-10

Outsourcing, Industry Sector, Market Analysis United Kingdom, 1992

Industry Sector	Market Size (£ Millions)	Percent
Manufacturing	200	36
- Discrete	110	20
- Process	90	16
Distribution (Wholesale & Retail)	35	6
Financial Services	90	16
- Banking & Finance	70	13
- Insurance	20	4
Public Sector	160	29
- Local Government	50	9
- National Government	40	7
- Health	70	13
Utilities	45	8
Services	30	5
Total	560	100

EXHIBIT IV-11

Outsourcing Market Forecast—1993-1998
Industry Sector, United Kingdom

Sector	1993 (£m)	1998 (£m)	CAGR (Percent)
Manufacturing	220	500	18
- Discrete	120	240	15
- Process	100	260	21
Distribution (Wholesale & Retail)	45	140	25
Financial Services	110	325	24
- Banking & Finance	85	250	24
- Insurance	25	75	25
Public Sector	240	850	29
- Local Government	100	400	32
- National Government	70	350	38
- Health	70	100	7
Utilities	50	100	15
Services	35	90	21
Total (rounded)	700	2,000	23

The highest growth in the United Kingdom over the next five years will be in the public sector. Within this sector, local government will be required to subject its IS activities to compulsory competitive tendering and central government departments will be encouraged to market test their own IS functions. This will produce a plethora of local government contracts and a small number of very large—in excess of $100 million—contracts from national government.

Growth rates for outsourcing are expected to decline in the utilities and discrete manufacturing sectors. The utilities sector has been very active in the United Kingdom over the past three years, but is now coming to the end of its cycle of systems renewal.

The leading outsourcing vendors in the United Kingdom in 1992 are listed in Exhibit IV-12.

EXHIBIT IV-12

Leading Outsourcing Vendors
United Kingdom, 1992

Rank	Company	Estimated Market Share (Percent)	1992 Estimated Revenue (£ Millions)
1	Hoskyns	15	84
2	AT&T Istel	14	80
3	EDS-Scicon	10	55
4	Sema Group	9	50
5	ICL/CFM	7	40
6	Data Sciences	6	35
7	Digital	5	28
8	Andersen Consulting	4	25
9 =	ITnet	3	15
9 =	Telecom Capita	3	15
	Total Listed	76	427
	Total Market	100	560

Hoskyns had a successful year in 1992. The company won 25 new outsourcing contracts and introduced new service offerings for applications management and desktop services. However Hoskyns is still operating primarily in the platform operations—including transition outsourcing—segment. The implications of this approach are twofold. Firstly the company is having to price its contracts very competitively and is making very low profit margins in the early years of these contracts. Secondly, the company is having to win large numbers of contracts each year just to maintain its revenue stream. Approximately 50% of the company's business comes from transition outsourcing contracts. These contracts are short-lived and often nonrenewable.

Hoskyns' move into desktop services is designed to enable the company to capture ongoing business from its transition outsourcing clients who are typically downsizing their mainframes.

AT&T Istel was comparatively unsuccessful in winning new business in 1992. During 1992, the company's strategy was primarily to buy market share. However the company found itself uncompetitive in the platform operations segment and this approach has now been changed to one based on targeting particular industries and seeking profitable contracts only.

The specialist vendors targeting local government—such as ICL/CFM and Telecom Capita—had a successful year in 1992, and can be expected to continue to grow rapidly.

The national government sector appears to favour major vendors such as EDS, CSC and IBM. As applications operations becomes more acceptable in the United Kingdom, so these vendors are expected to move up the outsourcing league table in the United Kingdom.

D

Financial Services Sector Exhibits Growth Potential in Italy

The two dominant sectors of the Italian outsourcing market are the government sector—with both local and central government showing growth potential—and the financial services sector.

Exhibit IV-13 provides INPUT's forecast for the outsourcing market in Italy.

EXHIBIT IV-13

Outsourcing Market—Italy, 1993-1998

	Market Forecast (Lira Billions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	130	150	17	330
- Desktop Services	12	15	25	45
- Applications Operations	160	185	19	440
Total Systems Operations	302	350	18	815
Network Management	38	50	26	160
Applications Management	20	27	24	80
Total Outsourcing (rounded)	360	425	20	1,050

The leading outsourcing vendors in Italy are listed in Exhibit IV-14.

EXHIBIT IV-14

Leading Outsourcing Vendors—Italy, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (Lira Billions)
1	Finsiel	36	130
2	Olivetti	10	35
3	CDS	6	20
4 =	Groupe Bull	4	15
4 =	S&M Group	4	15
6	Sarin	3	10
7 =	GSI	1	5
7 =	Digital	1	5
7 =	Datitalia Processing	1	5
7 =	Andersen Consulting	1	5
	Total Listed	67	245
	Total Market	100	360

In the last year the Italian market has been the target of considerable interest from a number of outsourcing vendors. GSI is endeavouring to strengthen its position in the Italian market as are IBM, with the formation of a subsidiary dedicated to outsourcing, and Digital.

E

Sweden

Exhibit IV-15 provides INPUT's forecast for the outsourcing market in Sweden

EXHIBIT IV-15

Outsourcing Market, Sweden, 1993-1998

	Market Forecast (SK Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	240	280	15	565
- Desktop Services	50	60	21	155
- Applications Operations	80	400	16	840
Total Systems Operations	370	740	16	1,560
Network Management	45	60	30	220
Applications Management	35	50	25	150
Total Outsourcing (rounded)	450	850	18	1,900

The leading outsourcing vendors in Sweden are listed in Exhibit IV-16.

EXHIBIT IV-16

Leading Outsourcing Vendors—Sweden, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (SK Millions)
1	EDEBE	13	60
2	EDS	11	50
3	Cap Gemini Sogeti	9	40
4	Unisys	7	30
5	Svenska Datacentralen	6	25
	Total Listed	46	205
	Total Market	100	450

F

Denmark

Exhibit IV-17 provides INPUT's forecast for the outsourcing market in Denmark.

EXHIBIT IV-17

Outsourcing Market—Denmark, 1993-1998

	Market Forecast (DK Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	55	65	17	145
- Desktop Services	30	40	20	100
- Applications Operations	65	75	19	180
Total Systems Operations	150	180	19	425
Network Management	15	19	27	60
Applications Management	15	20	24	60
Total Outsourcing (rounded)	180	220	20	540

The leading outsourcing vendors in Denmark are listed in Exhibit IV-18.

EXHIBIT IV-18

Leading Outsourcing Vendors—Denmark, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (DK Millions)
1	PBS	22	40
2	JDC	17	30
3	OK Data	8	15
4	danNet	6	10
5	Datema	3	5
	Total Listed	56	100
	Total Market	100	180

G

Norway

Exhibit IV-19 provides INPUT's forecast for the outsourcing market in Norway.

EXHIBIT IV-19

Outsourcing Market—Norway, 1993-1998

	Market Forecast (NK Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	85	100	16	210
- Desktop Services	30	40	24	115
- Applications Operations	70	80	18	180
Total Systems Operations	185	220	18	500
Network Management	20	25	27	83
Applications Management	13	20	21	52
Total Outsourcing (rounded)	220	265	19	640

The leading outsourcing vendors in Norway are listed in Exhibit IV-20.

EXHIBIT IV-20

Leading Outsourcing Vendors—Norway, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (NK Millions)
1	EDB A/S	11	25
2	NIT	9	20
3	Teamco	7	15
4	Fellesdata	5	10
5	Digital	2	5
	Total Listed	34	75
	Total Market	100	220

H

Finland

Exhibit IV-21 provides INPUT's forecast for the outsourcing market in Finland.

EXHIBIT IV-21

Outsourcing Market—Finland, 1993-1998

	Market Forecast (FM Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	100	115	16	240
- Desktop Services	12	15	25	45
- Application operations	70	80	16	170
Total Systems Operations	182	210	17	455
Network Management	18	23	27	75
Applications Management	5	5	25	15
Total Outsourcing (rounded)	205	240	18	545

The leading outsourcing vendors in Finland are listed in Exhibit IV-22.

EXHIBIT IV-22

Leading Outsourcing Vendors—Finland, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (FM Millions)
1	Tietotehdas	20	40
2	Paakupunk	15	30
3	Progmatic	10	20
4	VTKK	7	15
5	Digital	2	5
	Total Listed	54	110
	Total Market	100	205

I

Netherlands

Exhibit IV-23 provides INPUT's forecast for the outsourcing market in the Netherlands.

EXHIBIT IV-23

Outsourcing Market—Netherlands, 1993-1998

	Market Forecast (Dfl Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	100	120	16	250
- Desktop Services	40	55	21	140
- Applications Operations	55	65	18	150
Total Systems Operations	195	240	18	540
Network Management	20	25	21	65
Applications Management	25	35	26	110
Total Outsourcing (rounded)	240	300	19	715

The leading outsourcing vendors in the Netherlands are listed in Exhibit IV-24.

EXHIBIT IV-24

Leading Outsourcing Vendors—Netherlands, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (Dfl Millions)
1	RAET	15	35
2	EDS	13	30
3	CMG	8	20
4	CGS/Volmac	8	20
5	CSC	6	15
	Total Listed	50	120
	Total Market	100	240

J

Belgium

Exhibit IV-25 provides INPUT's forecast for the outsourcing market in Belgium.

EXHIBIT IV-25

Outsourcing Market—Belgium, 1993-1998

	Market Forecast (BF Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	1,500	1,700	16	3,600
- Desktop Services	30	40	30	150
- Application operations	810	950	18	2,150
Total Systems Operations	2,340	2,700	17	5,900
Network Management	110	135	21	350
Applications Management	50	80	26	250
Total Outsourcing (rounded)	2,500	2,900	18	6,500

The leading outsourcing vendors in Belgium are listed in Exhibit IV-26.

EXHIBIT IV-26

Leading Outsourcing Vendors—Belgium, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (BF Millions)
1	CSC	30	750
2	Cegeka	11	270
3	EDS	7	180
4	Digital	5	130
5	CMG	3	80
	Total Listed	56	1,410
	Total Market	100	2,500

K

Spain

Exhibit IV-27 provides INPUT's forecast for the outsourcing market in Spain.

EXHIBIT IV-27

Outsourcing Market—Spain, 1993-1998

	Market Forecast (Ptas Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	2,200	2,600	17	5,700
- Desktop Services	300	375	25	1,150
- Applications Operations	2,000	2,300	18	5,250
Total Systems Operations	4,500	5,300	18	12,100
Network Management	1,600	2,000	25	6,100
Applications Management	330	550	24	1,600
Total Outsourcing (rounded)	6,400	7,800	20	19,800

The leading outsourcing vendors in Spain are listed in Exhibit IV-28.

EXHIBIT IV-28

Leading Outsourcing Vendors—Spain, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (Ptas Millions)
1	GSI	25	1,600
2	EDS	6	400
3	Eritel	4	250
4	IBM	3	200
5	Unisys	3	200
	Total Listed	41	2,650
	Total Market	100	6,400

L

Switzerland

Exhibit IV-29 provides INPUT's forecast for the outsourcing market in Switzerland.

EXHIBIT IV-29

Outsourcing Market—Switzerland, 1993-1998

	Market Forecast (SF Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	30	35	11	60
- Desktop Services	4	5	25	15
- Applications Operations	20	23	14	45
Total Systems Operations	54	63	14	120
Network Management	7	9	29	32
Applications Management	3	3	25	9
Total Outsourcing (rounded)	65	75	16	160

The leading outsourcing vendors in Switzerland are listed in Exhibit IV-30.

EXHIBIT IV-30

Leading Outsourcing Vendors—Switzerland, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (SF Millions)
1	GSI	20	13
2	IBM	15	10
3	Telekurs	15	10
4	AC Service	8	5
5	Digital	8	5
	Total Listed	66	43
	Total Market	100	65

M

Austria

Exhibit IV-31 provides INPUT's forecast for the outsourcing market in Austria.

EXHIBIT IV-31

Outsourcing Market— Austria, 1993-1998

	Market Forecast (Sch Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	65	75	13	140
- Desktop Services	30	35	23	100
- Applications Operations	60	65	14	125
Total Systems Operations	155	175	16	365
Network Management	30	40	30	150
Applications Management	10	15	15	30
Total Outsourcing (rounded)	195	230	19	540

The leading outsourcing vendors in Austria are listed in Exhibit IV-32.

EXHIBIT IV-32

Leading Outsourcing Vendors—Austria, 1992

Rank	Company	Estimated Market Share (Percent)	Estimated Revenue (Sch Millions)
1	Data Service	13	25
2	GRZ	10	20
3 =	Management Data	5	10
3 =	Digital	5	10
3 =	IBM	5	10
	Total Listed	38	75
	Total Market	100	195

N

Portugal

Exhibit IV-33 provides INPUT's forecast for the outsourcing market in Portugal.

EXHIBIT IV-33

Outsourcing Market—Portugal, 1993-1998

	Market Forecast (Esc Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	120	140	18	320
- Desktop Services	60	73	21	190
- Applications Operations	95	110	20	275
Total Systems Operations	275	323	19	785
Network Management	100	124	27	410
Applications Management	-	-	-	-
Total Outsourcing (rounded)	375	445	22	1,200

Exhibit IV-34 provides INPUT's forecast for the outsourcing market in Greece.

EXHIBIT IV-34

Outsourcing Market—Greece, 1993-1998

	Market Forecast (Dra Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	350	400	15	800
- Desktop Services	50	60	23	170
- Applications Operations	230	260	14	500
Total Systems Operations	630	720	15	1,470
Network Management	100	130	28	450
Applications Management	-	-	-	-
Total Outsourcing (rounded)	730	850	17	1,900

P

Ireland

Exhibit IV-35 provides INPUT's forecast for the outsourcing market in Ireland.

EXHIBIT IV-35

Outsourcing Market—Ireland, 1993-1998

	Market Forecast (IR £ Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	3	4	20	10
- Desktop Services	-	-	-	3
- Applications Operations	1	2	25	6
Total Systems Operations	4	6	26	19
Network Management	1	1	25	3
Applications Management	-	-	-	-
Total Outsourcing (rounded)	5	7	26	22

Q

Eastern Europe

Exhibit IV-35 provides INPUT's forecast for the outsourcing market in Eastern Europe.

EXHIBIT IV-36

Outsourcing Market—Eastern Europe, 1993-1998

	Market Forecast (U.S. $ Millions)			
Subsector	1992	1993	1993-1998 CAGR (%)	1998
Systems Operations				
- Platform Operations	5	7	38	35
- Desktop Services	1	2	38	10
- Applications Operations	3	5	58	50
Total Systems Operations	9	14	47	95
Network Management	1	2	38	10
Applications Management	-	-	-	-
Total Outsourcing (rounded)	10	16	46	105

A

Market Forecasts in Local Currencies

Exhibits A-1 through A-17 present detailed outsourcing market forecasts for individual countries in their local currencies.

EXHIBIT A-1

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Austria, 1993-1998

	Sch Millions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	155	13	175	205	235	275	320	360	16
- Platform Operations	65	15	75	85	95	110	125	140	13
- Application Operations	60	8	65	75	85	95	110	120	13
- Desktop Services	30	17	35	45	55	70	85	100	23
Network Management	30	33	40	50	65	85	115	150	30
Application Management	10	50	15	17	20	23	27	30	15
Total Outsourcing	195	18	230	270	320	385	460	540	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-2

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Belgium, 1993-1998

Delivery Modes	BF Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	2,340	15	2,690	3,110	3,620	4,210	4,980	5,900	17
- Platform Operations	1,500	13	1,700	1,950	2,250	2,600	3,050	3,600	16
- Application Operations	810	17	950	1,110	1,300	1,520	1,810	2,150	18
- Desktop Services	30	33	40	50	65	85	115	150	30
Network Management	110	23	135	165	200	240	300	355	21
Application Management	50	60	80	100	130	160	200	250	26
Total Outsourcing	2,500	16	2,910	3,380	3,950	4,610	5,480	6,510	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-3

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Denmark, 1993-1998

Delivery Modes	DK Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	150	20	180	220	270	310	370	430	19
- Platform Operations	55	18	65	80	95	110	125	145	17
- Application Operations	65	15	75	90	110	130	155	180	19
- Desktop Services	30	33	40	50	60	70	85	100	20
Network Management	15	27	19	24	31	39	49	60	26
Application Management	15	33	20	25	30	40	50	60	25
Total Outsourcing	180	22	220	270	330	390	460	550	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-4

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Finland, 1993-1998

	FM Millions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	180	17	210	250	290	340	395	460	17
- Platform Operations	100	15	115	135	155	180	210	240	16
- Application Operations	70	14	80	95	110	130	150	175	17
- Desktop Services	12	25	15	19	23	29	36	45	25
Network Management	18	28	23	30	38	48	60	76	27
Application Management	5	0	5	6	7	9	12	15	25
Total Outsourcing	205	17	240	285	335	395	470	550	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-5

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
France, 1993-1998

	FF Millions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	2,850	16	3,300	3,750	4,400	5,200	6,300	7,900	19
- Platform Operations	1,530	14	1,750	1,890	2,180	2,550	3,100	4,010	18
- Application Operations	1,170	15	1,350	1,610	1,900	2,240	2,670	3,200	19
- Desktop Services	155	29	200	255	325	415	535	690	28
Network Management	575	22	700	850	1,030	1,260	1,520	1,800	21
Application Management	150	33	200	300	400	550	750	1,000	38
Total Outsourcing	3,600	17	4,200	4,900	5,850	7,000	8,600	10,700	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-6

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Germany, 1993-1998

Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
	DM Millions (rounded)								
Systems Operations	310	24	385	460	555	670	825	1,030	22
- Platform Operations	150	20	180	215	260	310	385	485	22
- Application Operations	100	25	125	150	180	220	270	335	22
- Desktop Services	60	33	80	95	115	140	170	210	21
Network Management	130	19	155	190	230	280	335	400	21
Application Management	12	92	23	29	36	45	56	70	25
Total Outsourcing	450	26	565	680	820	995	1,215	1,500	22

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-7

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Greece, 1993-1998

Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
	Dra Millions								
Systems Operations	650	8	700	850	950	1,100	1,300	1,450	16
- Platform Operations	350	14	400	460	530	610	700	800	15
- Application Operations	230	13	260	300	340	390	440	500	14
- Desktop Services	50	20	60	75	95	115	140	170	23
Network Management	100	30	130	165	215	280	360	455	28
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	750	13	850	1,000	1,200	1,400	1,650	1,950	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-8

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Ireland, 1993-1998

	IR£ Millions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	4	25	5	7	9	11	13	17	28
- Platform Operations	3	33	4	5	6	7	8	10	20
- Application Operations	1	36	2	2	3	3	4	5	20
- Desktop Services	0.2	100	1	1	1	2	2	3	25
Network Management	1	0	1	2	2	2	3	3	25
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	5	40	7	9	11	13	16	21	25

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-9

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Italy, 1993-1998

	Lira Billions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	300	17	350	410	485	575	675	815	18
- Platform Operations	130	15	150	160	190	230	270	330	17
- Application Operations	160	19	190	230	270	320	370	440	18
- Desktop Services	12	25	15	19	24	30	37	46	25
Network Management	38	32	50	65	80	100	125	160	26
Application Management	20	35	27	34	42	52	64	80	24
Total Outsourcing	360	19	430	510	610	730	870	1,060	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-10

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Netherlands, 1993-1998

Delivery Modes	Dfl Millions 1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	195	23	240	280	330	385	455	540	18
- Platform Operations	100	20	120	140	160	185	215	250	16
- Application Operations	55	18	65	75	90	105	125	150	18
- Desktop Services	40	38	55	65	80	95	115	140	21
Network Management	20	25	25	30	35	45	55	65	21
Application Management	25	40	35	45	55	70	85	110	26
Total Outsourcing	240	25	300	355	420	500	595	715	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-11

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Norway, 1993-1998

Delivery Modes	NK Millions 1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	185	22	225	265	310	365	430	505	18
- Platform Operations	85	18	100	115	135	155	180	210	16
- Application Operations	70	21	85	100	115	135	155	180	16
- Desktop Services	30	33	40	50	60	75	95	115	24
Network Management	20	25	25	31	40	51	65	83	27
Application Management	13	15	15	20	25	30	40	50	27
Total Outsourcing	220	20	265	315	375	445	535	640	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-12

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Portugal, 1993-1998

Delivery Modes	Esc Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	275	20	330	390	470	570	685	780	19
- Platform Operations	120	17	140	165	195	235	280	315	18
- Application Operations	95	21	115	135	165	200	240	275	19
- Desktop Services	60	22	73	90	110	135	165	190	21
Network Management	100	25	125	160	205	265	340	410	27
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	375	21	455	550	675	835	1,025	1,190	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-13

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Spain, 1993-1998

Delivery Modes	Ptas Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	4,500	18	5,300	6,200	7,300	8,600	10,100	12,100	18
- Platform Operations	2,200	18	2,600	3,000	3,500	4,100	4,800	5,700	17
- Application Operations	2,000	18	2,350	2,750	3,200	3,750	4,400	5,250	17
- Desktop Services	300	25	375	465	575	720	905	1,150	25
Network Management	1,600	25	2,000	2,500	3,200	4,100	5,100	6,200	25
Application Management	330	67	550	680	840	1,030	1,280	1,600	24
Total Outsourcing	6,400	23	7,900	9,400	11,300	13,700	16,500	19,900	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-14

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Sweden, 1993-1998

Delivery Modes	SK Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	370	100	740	870	1,015	1,170	1,345	1,560	16
- Platform Operations	240	17	280	325	375	430	490	565	15
- Application Operations	80	400	400	470	550	630	725	840	16
- Desktop Services	50	20	60	75	90	110	130	155	21
Network Management	45	33	60	80	105	135	175	220	30
Application Management	35	29	45	60	75	95	120	150	27
Total Outsourcing	450	88	845	1,010	1,195	1,400	1,640	1,930	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-15

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Switzerland, 1993-1998

Delivery Modes	SF Millions								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	54	17	63	71	82	94	108	121	14
- Platform Operations	30	17	35	39	44	49	55	60	11
- Application Operations	20	15	23	26	30	35	40	45	14
- Desktop Services	4	25	5	6	8	10	13	16	26
Network Management	7	29	9	12	15	20	26	33	30
Application Management	3	0	3	4	5	6	7	9	25
Total Outsourcing	64	17	75	87	102	120	141	163	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-16

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
United Kingdom

	ECU Millions (Rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	475	23	585	705	845	1,030	1,270	1,565	22
- Platform Operations	270	15	310	360	410	480	570	680	17
- Application Operations	160	31	210	270	340	430	550	700	27
- Desktop Services	50	30	65	80	100	125	155	190	24
Network Management	60	25	75	95	120	150	190	240	26
Application Management	25	40	35	50	70	100	140	195	41
Outsourcing Total	560	25	700	850	1,035	1,280	1,600	2,000	23

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT A-17

Outsourcing Services Market
User Expenditure Forecast by Delivery Mode and Submode
Eastern Europe, 1993-1998

	U.S. $ Millions								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	9	56	14	19	29	42	61	95	47
- Platform Operations	5	40	7	9	13	18	25	35	38
- Application Operations	3	67	5	8	12	19	30	50	58
- Desktop Services	1	100	2	3	4	5	6	10	38
Network Management	1	100	2	1	2	3	5	10	38
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	10	60	16	20	31	45	66	105	46

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

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B

Market Forecast in U.S. Dollars (Millions)

Exhibit B-1 presents the outsourcing market forecast for Europe in U.S. dollars. Exhibits B-2 through B-18 present the forecast for individual countries in U.S. dollars.

EXHIBIT B-1

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Europe, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	2,150	23	2,650	3,100	3,700	4,450	5,375	6,600	20
- Platform Operations	1,160	16	1,340	1,520	1,760	2,060	2,460	3,010	18
- Application Operations	810	28	1,040	1,270	1,530	1,860	2,270	2,790	22
- Desktop Services	210	31	275	335	420	520	645	800	24
Network Management	370	24	460	580	710	880	1,090	1,330	24
Application Management	130	31	170	240	310	420	560	740	34
Total Outsourcing	2,680	23	3,290	3,950	4,730	5,730	7,030	8,670	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-2

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Austria, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	14	13	16	19	22	26	30	33	16
- Platform Operations	6	17	7	8	9	10	12	13	13
- Application Operations	6	8	6	7	8	9	10	11	13
- Desktop Services	3	17	3	5	5	7	8	10	27
Network Management	3	33	4	5	6	8	11	14	28
Application Management	1	50	2	2	2	2	3	3	8
Total Outsourcing	18	17	21	25	30	36	42	50	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-3

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Belgium, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	74	15	85	98	114	132	156	185	17
- Platform Operations	47	15	54	61	71	82	96	113	16
- Application Operations	26	15	30	35	41	48	57	68	18
- Desktop Services	1	33	2	2	2	3	4	5	20
Network Management	4	23	4	5	7	8	10	11	22
Application Management	2	60	3	4	5	5	7	8	22
Total Outsourcing	79	15	91	106	124	145	172	204	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-4

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Denmark, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	25	20	30	37	45	52	62	72	19
- Platform Operations	9	22	11	14	16	19	21	24	17
- Application Operations	11	18	13	15	19	22	26	30	18
- Desktop Services	5	40	7	9	11	12	15	17	19
Network Management	3	27	3	4	5	7	8	10	27
Application Management	3	33	4	5	5	7	7	11	22
Total Outsourcing	30	22	37	45	55	65	77	92	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-5

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Finland, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	37	17	43	51	59	69	80	93	17
- Platform Operations	20	15	23	27	32	37	43	49	16
- Application Operations	14	14	16	19	22	26	30	36	18
- Desktop Services	3	25	3	4	5	6	8	10	27
Network Management	4	25	5	6	8	10	12	16	26
Application Management	1	0	1	2	2	2	3	3	25
Total Outsourcing	42	17	49	58	68	80	95	111	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-6

Outsourcing Services Market
Software and Services Market Forecast in Dollars
France, 1993-1998

Delivery Modes	U.S. $ Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	540	17	630	718	832	990	1,200	1,500	19
- Platform Operations	290	14	330	360	410	480	590	760	18
- Application Operations	220	18	260	310	360	430	510	610	19
- Desktop Services	29	31	38	48	62	79	102	131	28
Network Management	110	18	130	160	200	240	290	340	21
Application Management	29	31	38	57	76	105	143	190	38
Total Outsourcing	680	18	800	930	1,110	1,330	1,630	2,030	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-7

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Germany, 1993-1998

Delivery Modes	U.S. $ Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	200	25	250	300	360	430	530	660	21
- Platform Operations	100	20	120	140	170	200	250	310	21
- Application Operations	60	33	80	100	120	140	170	220	22
- Desktop Services	39	33	52	61	74	90	110	135	21
Network Management	80	25	100	120	150	180	220	260	21
Application Management	8	88	15	19	23	29	6	45	25
Total Outsourcing	290	24	360	440	537	640	780	970	22

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-8

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Greece, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	3	8	4	5	5	6	7	8	15
- Platform Operations	2	14	2	3	3	3	4	4	15
- Application Operations	1	13	2	2	2	2	3	3	8
- Desktop Services	0	20	1	1	1	1	1	1	23
Network Management	1	30	1	1	2	2	2	3	25
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	4	13	5	5	6	7	9	10	15

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-9

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Ireland, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	7	29	9	12	16	19	23	29	26
- Platform Operations	5	20	6	8	10	11	14	17	23
- Application Operations	2	50	3	4	5	6	6	8	22
- Desktop Services	0	100	1	2	2	3	4	5	38
Network Management	2	0	2	3	4	4	5	6	27
Application Management	1	0	1	1	1	1	1	1	0
Total Outsourcing	9	33	12	16	22	25	30	36	25

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-10

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Italy, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	229	18	260	300	360	432	500	600	18
- Platform Operations	100	10	110	120	140	170	200	240	17
- Application Operations	120	17	140	170	200	240	270	320	18
- Desktop Services	9	22	11	14	18	22	27	34	25
Network Management	30	33	40	50	60	70	90	120	25
Application Management	15	33	20	25	31	38	47	59	24
Total Outsourcing	260	23	320	380	450	540	640	780	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHBIIT B-11

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Netherlands, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	112	23	138	161	190	222	262	311	18
- Platform Operations	58	19	69	81	92	107	124	144	16
- Application Operations	32	19	38	43	52	61	72	86	18
- Desktop Services	23	39	32	38	46	55	67	81	20
Network Management	12	17	14	17	20	26	32	38	22
Application Management	15	40	21	26	32	41	49	64	25
Total Outsourcing	138	25	173	204	242	290	342	411	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-12

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Norway, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	33	21	35	42	49	57	67	79	18
- Platform Operations	14	14	16	18	21	24	28	33	16
- Application Operations	11	27	14	16	18	21	24	28	15
- Desktop Services	5	-13	6	8	10	12	15	18	21
Network Management	3	33	4	5	6	8	10	13	27
Application Management	3	0	3	4	4	5	7	8	22
Total Outsourcing	35	20	42	49	59	70	84	100	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-13

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Portugal, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	2	50	3	3	4	5	5	6	15
- Platform Operations	1	17	1	2	2	2	2	3	25
- Application Operations	1	21	1	1	2	2	2	2	15
- Desktop Services	0	22	1	1	1	1	2	2	15
Network Management	1	25	1	2	2	2	3	3	25
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	3	48	4	4	5	6	8	9	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-14

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Spain, 1993-1998

Delivery Modes	U.S. $ Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	41	17	48	56	66	78	91	109	18
- Platform Operations	20	20	24	27	32	37	44	52	17
- Application Operations	18	17	21	25	29	34	40	48	18
- Desktop Services	3	33	4	5	6	7	9	11	22
Network Management	15	20	18	23	29	37	46	56	25
Application Management	3	67	5	7	8	10	12	15	25
Total Outsourcing	58	24	72	85	102	124	149	180	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-15

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Sweden, 1993-1998

Delivery Modes	U.S. $ Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	60	98	119	140	163	188	216	250	16
- Platform Operations	39	15	45	52	60	69	79	91	15
- Application Operations	13	392	64	76	88	101	116	135	16
- Desktop Services	8	25	10	12	15	18	21	25	20
Network Management	6	67	10	14	17	22	28	36	29
Application Management	6	33	8	10	12	16	20	25	26
Total Outsourcing	72	89	136	162	192	225	263	310	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-16

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Switzerland, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	39	18	46	51	59	68	78	87	14
- Platform Operations	22	14	25	28	32	36	40	43	11
- Application Operations	15	13	17	19	22	25	29	33	14
- Desktop Services	3	33	4	5	6	8	10	12	25
Network Management	5	40	7	9	11	14	19	24	28
Application Management	3	0	3	3	4	5	6	7	18
Total Outsourcing	47	15	54	63	74	87	102	118	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-17

Outsourcing Services Market
Software and Services Market Forecast in Dollars
United Kingdom, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	759	23	920	1,126	1,348	1,637	2,000	2,470	22
- Platform Operations	430	14	490	570	650	760	900	1,070	17
- Application Operations	250	32	330	430	540	680	870	1,100	27
- Desktop Services	79	30	103	126	158	197	244	300	24
Network Management	90	33	120	150	190	240	300	380	26
Application Management	39	41	55	79	110	158	221	308	41
Total Outsourcing	900	22	1,100	1,360	1,648	2,030	2,540	3,158	24

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT B-18

Outsourcing Services Market
Software and Services Market Forecast in Dollars
Eastern Europe, 1993-1998

	U.S. $ Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	9	56	14	19	29	42	61	95	47
- Platform Operations	5	40	7	9	13	18	25	35	38
- Application Operations	3	67	5	8	12	19	30	50	58
- Desktop Services	1	100	2	3	4	5	6	10	38
Network Management	1	100	2	1	2	3	5	10	38
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	10	60	16	20	31	45	66	105	46

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

C

Market Forecasts in ECUs (Millions)

Exhibit C-1 presents the outsourcing market forecast for Europe in ECUs. Exhibits C-2 through C-8 present the forecast for individual countries in ECUs.

EXHIBIT C-1

Outsourcing Services Market Software and Services Market Forecast in ECUs Europe, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	1,700	24	2,100	2,450	2,950	3,500	4,220	5,200	21
- Platform Operations	910	16	1,060	1,210	1,400	1,640	1,940	2,370	17
- Application Operations	640	28	820	1,000	1,210	1,480	1,790	2,200	22
- Desktop Services	165	33	220	265	335	415	510	625	23
Network Management	300	23	370	460	560	700	870	1,050	23
Application Management	100	40	140	190	250	330	4,30	580	33
Total Outsourcing	2,120	23	2,610	3,130	3,760	4,570	5,520	6,830	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-2

Outsourcing Services Market Software and Services Market Forecast in ECUs Austria, 1993-1998

Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
	ECU Millions (rounded)								
Systems Operations	11	18	13	15	17	20	23	26	15
- Platform Operations	5	20	6	6	7	8	9	10	11
- Application Operations	5	8	5	6	6	7	8	9	12
- Desktop Services	22	17	3	4	4	6	7	8	22
Network Management	2	33	3	4	5	6	9	11	30
Application Management	1	50	1	1	2	2	2	2	15
Total Outsourcing	14	21	17	20	23	28	34	39	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-3

Outsourcing Services Market Software and Services Market Forecast in ECUs Belgium, 1993-1998

Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
	ECU Millions (rounded)								
Systems Operations	58	16	67	77	90	105	124	147	17
- Platform Operations	37	14	42	49	56	65	76	89	16
- Application Operations	20	20	24	28	32	38	45	54	18
- Desktop Services	1	33	1	2	2	3	3	4	30
Network Management	3	33	4	4	5	6	8	9	18
Application Management	1	60	2	3	3	4	5	6	25
Total Outsourcing	62	16	72	84	98	115	136	162	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-4

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Denmark, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	20	20	24	29	36	41	49	57	19
- Platform Operations	8	13	9	11	13	15	17	19	16
- Application Operations	9	11	10	12	15	17	21	24	19
- Desktop Services	4	33	4	7	8	10	12	14	28
Network Management	2	50	3	3	4	5	7	8	22
Application Management	2	50	3	4	4	6	7	8	22
Total Outsourcing	24	21	29	36	44	52	61	73	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-5

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Finland, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	30	17	35	41	48	56	65	76	17
- Platform Operations	17	12	19	22	26	30	35	40	16
- Application Operations	12	8	13	16	18	22	25	29	17
- Desktop Services	2	50	3	4	4	5	6	8	22
Network Management	3	33	4	5	6	8	10	13	27
Application Management	1	0	1	1	1	2	2	3	25
Total Outsourcing	34	18	40	47	55	65	77	90	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-6

Outsourcing Services Market
Software and Services Market Forecast in ECUs
France, 1993-1998

Delivery Modes	ECU Millions (rounded) 1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	430	16	500	560	669	780	950	1,184	19
- Platform Operations	230	13	260	280	330	380	470	600	18
- Application Operations	180	11	200	240	290	340	400	480	19
- Desktop Services	23	30	30	38	49	63	81	104	28
Network Management	90	22	110	130	160	190	230	270	21
Application Management	20	50	30	50	60	80	110	150	38
Total Outsourcing	540	17	630	740	889	1,050	1,291	1,604	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-7

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Germany, 1993-1998

Delivery Modes	ECU Millions (rounded) 1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	160	25	191	230	280	340	420	520	21
- Platform Operations	80	13	90	110	130	160	200	250	23
- Application Operations	50	20	60	80	90	110	140	170	23
- Desktop Services	30	37	41	48	58	71	86	107	21
Network Management	70	14	80	100	120	140	170	200	20
Application Management	10	92	10	10	20	20	30	40	32
Total Outsourcing	240	26	281	350	420	501	620	760	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-8

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Greece, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	3	8	3	3	4	4	5	6	15
- Platform Operations	1	14	2	2	2	2	3	3	15
- Application Operations	1	13	1	1	1	2	2	2	14
- Desktop Services	0	29	0	0	0	0	1	1	23
Network Management	0	30	1	1	1	1	1	2	28
Application Management	0	-	0	0	0	0	0	0	-
Total Outsourcing	3	33	4	4	5	6	7	8	15

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-9

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Ireland, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	5	40	7	9	12	15	17	23	27
- Platform Operations	4	17	5	6	7	9	11	13	21
- Application Operations	2	36	2	3	3	4	5	6	25
- Desktop Services	0	100	1	1	1	2	3	4	32
Network Management	1	0	1	2	2	3	4	4	27
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	5	40	7	10	13	17	20	26	30

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-10

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Italy, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	177	18	209	231	280	337	390	477	19
- Platform Operations	80	13	90	90	110	130	160	190	16
- Application Operations	90	22	110	130	160	190	210	260	19
- Desktop Services	7	29	9	11	14	17	21	27	25
Network Management	20	50	30	40	50	60	70	90	25
Application Management	10	35	20	20	20	30	40	50	20
Total Outsourcing	210	19	259	291	350	427	500	617	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-11

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Netherlands, 1993-1998

Delivery Modes	ECU Millions (rounded)								
	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	89	22	109	128	150	175	207	246	18
- Platform Operations	46	20	55	64	73	84	98	114	16
- Application Operations	25	20	30	34	41	48	57	68	18
- Desktop Services	19	32	25	30	37	44	53	64	21
Network Management	9	33	12	14	16	21	25	30	20
Application Management	12	33	16	21	25	32	39	50	26
Total Outsourcing	111	26	137	162	191	228	271	325	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-12

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Norway, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	23	22	28	33	38	45	53	62	17
- Platform Operations	11	18	13	14	17	19	22	26	15
- Application Operations	9	22	11	13	14	17	19	22	15
- Desktop Services	4	25	5	7	8	10	12	15	25
Network Management	3	25	3	4	5	7	8	10	27
Application Management	2	15	2	3	3	4	5	6	25
Total Outsourcing	27	22	33	39	46	55	66	79	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-13

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Portugal, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	2	20	2	3	3	4	4	5	20
- Platform Operations	1	17	1	1	2	2	2	2	18
- Application Operations	1	21	1	1	1	2	2	2	19
- Desktop Services	0	22	0	1	1	1	1	2	21
Network Management	1	25	1	1	2	2	2	3	27
Application Management	0	0	0	0	0	0	0	0	0
Total Outsourcing	3	21	3	4	4	5	6	7	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-14

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Spain, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	32	19	38	44	52	62	72	86	18
- Platform Operations	16	19	19	22	25	29	34	41	17
- Application Operations	15	13	17	20	23	27	32	38	17
- Desktop Services	3	25	3	4	5	6	7	9	25
Network Management	12	25	15	18	23	29	37	44	24
Application Management	3	67	4	5	6	8	9	12	25
Total Outsourcing	46	23	57	67	81	98	118	142	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-15

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Sweden, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	47	98	93	110	128	147	169	196	16
- Platform Operations	30	17	35	41	47	54	62	71	15
- Application Operations	10	400	51	59	69	79	91	106	16
- Desktop Services	7	14	8	10	12	14	17	20	20
Network Management	6	33	8	10	13	17	22	28	28
Application Management	5	20	6	8	10	12	15	19	26
Total Outsourcing	57	86	106	127	150	176	206	243	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-16

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Switzerland, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	31	16	36	41	47	54	62	69	14
- Platform Operations	17	18	20	23	25	28	32	35	12
- Application Operations	12	8	13	15	17	20	23	26	15
- Desktop Services	2	25	3	4	5	6	8	10	27
Network Management	4	29	5	7	9	11	15	19	31
Application Management	2	0	2	3	4	4	5	5	5
Total Outsourcing	37	17	43	50	69	59	81	93	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-17

Outsourcing Services Market
Software and Services Market Forecast in ECUs
United Kingdom, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	603	24	730	890	1,060	1,290	1,590	1,960	22
- Platform Operations	340	15	390	450	510	600	710	850	17
- Application Operations	200	30	260	340	430	540	690	880	28
- Desktop Services	63	29	81	100	125	156	194	238	24
Network Management	80	13	90	120	150	190	240	300	27
Application Management	30	33	40	60	90	130	180	240	43
Total Outsourcing	710	24	861	1,070	1,300	1,610	2,010	2,510	23

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

EXHIBIT C-18

Outsourcing Services Market
Software and Services Market Forecast in ECUs
Eastern Europe, 1993-1998

	ECU Millions (rounded)								
Delivery Modes	1992	92-93 Growth (%)	1993	1994	1995	1996	1997	1998	93-98 CAGR (%)
Systems Operations	7	56	11	15	23	33	48	75	47
- Platform Operations	4	40	6	7	10	14	20	28	38
- Application Operations	2	67	4	6	9	15	24	40	58
- Desktop Services	1	100	1	2	3	5	5	8	38
Network Management	1	100	2	2	2	2	4	8	38
Application Management	0	0	0	0	0	0	0	0	-
Total Outsourcing	8	60	13	16	24	36	52	83	46

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

D

Forecast Reconciliation

There is a variance of -5% between last year's forecast and the revised forecast for 1992.

However, a new subsector—applications management—has been introduced into outsourcing in 1993. This contributes an increase of +5% to the European outsourcing market.

The result is a variance of -10% between last year's and this year's outsourcing forecasts for 1992 on a "like for like" basis.

Variations in exchange rate account for -6% of this difference. The remaining -4% reflects a downward revision of the outsourcing market growth expected in 1992. While many vendors continued to exhibit high levels of growth, others found growth difficult to achieve in an increasingly competitive market. In particular, the expected high level of growth failed to materialise in the desktop services market which began 1992 with the signing of a number of major contracts.

Overall, high levels of growth are expected to continue in the European outsourcing market. However, the difference in growth between the applications operations and the platform operations sectors is expected to widen, and the growth of the desktop services market has been revised downwards.

Exhibit D-1 shows the reconciliation for Europe between the 1992 and 1993 forecasts.

Detailed reconciliations for each of the countries are shown in Exhibits D-2 to D-17.

A

Europe

The forecasts for the platform operations and applications operations sectors have been revised downwards for 1992. The growth forecasts remain similar to those forecast in 1992. Exhibit D-1 shows the reconciliation for Europe between the 1992 and 1993 forecasts.

EXHIBIT D-1

Outsourcing Services Market, Europe 1993 Forecast Database Reconciliation Europe, 1992-1997

	1992 Market				1997 Market				1992	1993
U.S. $ Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	2,400	2,180	-220	-9.17	6,3520	5,350	-975	-15.35	21	20
- Platform Operations	1,260	1,160	-100	-7.94	3,020	2,460	-560	-18.54	19	16
- Application Operations	880	810	-70	-7.95	2,280	2,270	-10	-0.44	21	23
- Desktop Services	260	210	-50	-19.23	1,050	645	-405	-38.57	32	25
Network Management	410	370	-40	-9.76	1,180	1,090	-90	-7.63	24	24
Application Management		130	130			560	560			34
Outsourcing Total	2,810	2,680	-130	-4.63	7,530	7,025	-505	-6.71	22	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

B

Austria

Exhibit D-2 shows the reconciliation between the 1992 and 1993 forecasts for Austria.

EXHIBIT D-2

Information Services Market 1993 Forecast Database Reconciliation Austria, 1992-1997

	1992 Market				1997 Market				1992	1993
Sch Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	175	155	-20	-11	360	320	-40	-11	16	16
- Platform Operations	75	65	-10	-13	140	125	-15	-11	13	14
- Application Operations	70	60	-10	-14	135	110	-25	-19	14	13
- Desktop Services	30	30	0	0	85	85	0	0	23	23
Network Management	30	30	0	0	110	115	5	5	30	31
Application Management		10	10			27	27			22
Total Outsourcing	205	195	-10	-5	470	460	-10	-2	18	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

C

Belgium

The forecasts for the platform operations and applications operations sectors in Belgium in 1992 have been revised upwards in response to CSC's increasing success there, as shown in Exhibit D-3.

EXHIBIT D-3

Information Services Market 1993 Forecast Database Reconciliation Belgium, 1992-1997

	1992 Market				1997 Market				1992	1993
BF Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	1,720	2,340	620	36	3,770	4,975	1,205	32	17	16
- Platform Operations	1,050	1,500	450	43	2,200	3,050	850	39	16	15
- Application Operations	640	810	170	27	1,460	1,810	350	24	18	17
- Desktop Services	30	30	0	0	110	115	5	5	30	31
Network Management	110	110	0	0	285	300	15	5	21	22
Application Management		50	50			200	200			32
Total Outsourcing	1,830	2,500	670	37	4,055	5,475	1,420	35	17	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

D

Denmark

The expected growth of the applications operations sector in Denmark has been increased following EDS' success in this sector in Scandinavia in 1993, as shown in Exhibit D-4.

EXHIBIT D-4

Information Services Market 1993 Forecast Database Reconciliation Denmark, 1992-1997

	1992 Market				1997 Market				1992	1993
DK Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	150	150	-5	-3	350	370	20	6	19	20
- Platform Operations	55	55	0	0	120	125	5	4	17	18
- Application Operations	65	65	0	0	130	155	25	19	15	19
- Desktop Services	30	30	0	0	100	85	-15	-15	27	23
Network Management	15	15	0	0	50	49	-1	-2	27	27
Application Management		15	15			50	50			27
Total Outsourcing	165	180	15	9	400	460	60	16	19	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

E

Finland

Exhibit D-5 shows the reconciliation between the 1992 and 1993 forecasts for Finland.

EXHIBIT D-5

Information Services Market
1993 Forecast Database Reconciliation
Finland, 1992-1997

	1992 Market				1997 Market				1992	1993
FM Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	182	182	0	0	392	395	3	1	17	17
- Platform Operations	100	100	0	0	210	210	0	0	16	16
- Application Operations	70	70	0	0	150	150	0	0	16	17
- Desktop Services	12	12	0	0	32	36	4	13	22	25
Network Management	18	18	0	0	58	60	2	3	26	27
Application Management	-	5	5		-	12	12			19
Total Outsourcing	200	205	5	3	450	467	17	4	18	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

F

France

Exhibit D-6 shows the reconciliation between the 1992 and 1993 forecasts for France.

EXHIBIT D-6

Information Services Market 1993 Forecast Database Reconciliation France, 1992-1997

	1992 Market				1997 Market				1992	1993
FF Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	2,825	2,850	30	1	6,630	6,305	-325	-5	19	17
- Platform Operations	1,370	1,530	160	12	3,290	3,100	-190	-6	19	15
- Application Operations	1,300	1,170	-130	-10	2,810	2,670	-140	-5	17	18
- Desktop Services	155	155	0	0	530	535	5	1	28	28
Network Management	575	575	0	0	1,480	1,520	40	3	21	21
Application Management		150	150			700	700			38
Total Outsourcing	3,400	3,580	180	5	8,110	8,525	415	5	19	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

G

Germany

This reconciliation, Exhibit D-7, does not show the contribution from SAP outsourcing mentioned earlier in the report. The size of the platform operations sector in Germany in 1992 has been revised upwards in the light of debis Systemhaus' success in this sector. Similarly, the growth rate for the platform operations sector has been increased.

EXHIBIT D-7

Information Services Market 1993 Forecast Database Reconciliation Germany, 1992-1997

	1992 Market				1997 Market				1992	1993
DM Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	250	310	60	24	720	825	105	15	23	22
- Platform Operations	80	150	70	88	170	385	215	126	16	21
- Application Operations	110	100	-10	-9	300	270	-30	-10	22	22
- Desktop Services	60	60	0	0	250	170	-80	-32	33	23
Network Management	130	130	0	0	340	335	-5	-1	21	21
Application Management		12	12			53	53			35
Total Outsourcing	380	450	70	18	1,060	1,215	155	15	22	22

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

H

Greece

Exhibit D-8 shows the reconciliation between the 1992 and 1993 forecasts for Greece.

EXHIBIT D-8

Information Services Market 1993 Forecast Database Reconciliation Greece, 1992-1997

	1992 Market				1997 Market				1992	1993
Dra Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	630	630	0	0	1,280	1,280	40	3	15	15
- Platform Operations	350	350	0	0	690	700	10	1	15	15
- Application Operations	230	230	0	0	450	440	-10	-2	14	14
- Desktop Services	50	50	0	0	140	140	0	0	23	23
Network Management	100	100	0	0	340	360	20	6	28	29
Application Management		0	0			0	0			0
Total Outsourcing	730	730	20	3	1,620	1,640	20	1	17	18

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

I

Ireland

The overall growth forecast for the Irish outsourcing market has been revised upwards, as shown in Exhibit D-9.

EXHIBIT D-9

Information Services Market 1993 Forecast Database Reconciliation Ireland, 1992-1997

	1992 Market				1997 Market				1992	1993
IP Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	4	4	0	0	8	13	5	65	17	27
- Platform Operations	3	3	1	20	6	8	2	33	19	22
- Application Operations	2	1	0	-27	2	4	2	133	0	26
- Desktop Services	0	0	0	33	1	2	1	138	40	57
Network Management	1	1	0	0	3	3	0	-13	25	22
Application Management		0	0			0	0			0
Total Outsourcing	5	5	0	-3	11	16	5	40	17	26

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

J

Italy

Exhibit D-10 shows the reconciliation between the 1992 and 1993 forecasts for Italy.

EXHIBIT D-10

Information Services Market 1993 Forecast Database Reconciliation Italy, 1992-1997

	1992 Market				1997 Market				1992	1993
Lira Billions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	302	302	0	0	706	677	-30	-4	19	18
- Platform Operations	130	130	0	0	285	270	-15	-5	17	16
- Application Operations	160	160	0	0	385	370	-15	-4	19	18
- Desktop Services	12	12	0	0	36	37	2	4	24	25
Network Management	38	38	0	0	120	140	20	17	26	30
Application Management		20	20			64	64			26
Total Outsourcing	340	360	20	6	826	881	55	7	19	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

K

Netherlands

The forecast for the application operations segment has been increased, as shown in Exhibit D-11, in the expectation that this segment will grow faster than the platform operations segment.

EXHIBIT D-11

Information Services Market 1993 Forecast Database Reconciliation Netherlands, 1992-1997

	1992 Market				1997 Market				1992	1993
Dfl Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	195	195	0	0	485	455	-30	-6	20	18
- Platform Operations	100	100	0	0	210	215	5	2	16	17
- Application Operations	55	55	0	0	115	125	10	9	16	18
- Desktop Services	40	40	0	0	160	115	-45	-28	32	24
Network Management	20	20	0	0	55	55	0	0	22	22
Application Management		25	25			85	85			28
Total Outsourcing	215	240	25	12	540	595	55	10	20	20

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

L

Norway

Exhibit D-12 shows the reconciliation between the 1992 and 1993 forecasts for Norway.

EXHIBIT D-12

Information Services Market
1993 Forecast Database Reconciliation
Norway, 1992-1997

	1992 Market				1997 Market				1992	1993
NK Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	185	185	0	0	450	430	-20	-4	20	18
- Platform Operations	85	85	0	0	180	180	0	0	16	16
- Application Operations	70	70	0	0	160	155	-5	-3	18	17
- Desktop Services	30	30	0	0	110	95	-15	-14	30	26
Network Management	20	20	0	0	65	65	0	0	27	27
Application Management		13	13			40	40			25
Total Outsourcing	205	220	15	7	515	535	20	4	20	19

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

M
Portugal

The growth forecast for the platform operations sector has been revised downwards, as shown in Exhibit D-13.

EXHIBIT D-13

Information Services Market
1993 Forecast Database Reconciliation
Portugal, 1992-1997

	1992 Market				1997 Market				1992	1993
Esc Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	275	275	0	0	733	685	-48	-7	22	20
- Platform Operations	120	120	0	0	325	280	-45	-14	22	18
- Application Operations	95	95	0	0	235	240	5	2	20	20
- Desktop Services	60	60	0	0	173	165	-8	-5	24	22
Network Management	100	100	0	0	325	340	16	5	27	28
Application Management		0	0			0	0			0
Total Outsourcing	375	375	0	0	1,058	1,025	-32	-3	23	22

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

N

Spain

Exhibit D-14 shows the reconciliation between the 1992 and 1993 forecasts for Spain.

EXHIBIT D-14

Information Services Market 1993 Forecast Database Reconciliation Spain, 1992-1997

Ptas Millions / Delivery Mode	1992 Market				1997 Market				1992	1993
	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	4,800	4,500	-300	-6	10,300	10,100	-200	-2	17	18
- Platform Operations	2,200	2,200	0	0	4,600	4,800	200	4	16	17
- Application Operations	2,300	2,000	-300	-13	4,800	4,400	-400	-8	16	17
- Desktop Services	300	300	0	0	920	905	-15	-2	25	25
Network Management	1,600	1,600	0	0	4,900	5,100	200	4	25	26
Application Management		330	330			1,280	1,280			31
Total Outsourcing	6,400	6,400	0	0	15,200	16,500	1,280	8	19	21

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

O

Sweden

The growth forecast for the applications operations sector has been increased substantially, as shown in Exhibit D-15, following EDS' major contract with KF signed in early 1993.

EXHIBIT D-15

Information Services Market 1993 Forecast Database Reconciliation Sweden, 1992-1997

	1992 Market				1997 Market				1992	1993
SK Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	370	370	0	0	805	1,345	540	67	17	29
- Platform Operations	240	240	0	0	480	490	10	2	15	15
- Application Operations	80	80	0	0	155	725	570	368	14	55
- Desktop Services	50	50	0	0	170	130	-40	-24	28	21
Network Management	45	45	0	0	170	175	5	3	30	31
Application Management		35	35			120	120			28
Total Outsourcing	415	450	35	8	975	1,640	665	68	19	30

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

P

Switzerland

Exhibit D-16 shows the reconciliation between the 1992 and 1993 forecasts for Switzerland.

EXHIBIT D-16

Information Services Market 1993 Forecast Database Reconciliation Switzerland, 1992-1997

		1992 Market			1997 Market				1992	1993
SF Millions Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	53	54	1	2	102	108	7	7	14	15
- Platform Operations	29	30	1	3	50	55	6	11	11	13
- Application Operations	20	20	0	0	40	40	0	0	15	15
- Desktop Services	4	4	0	0	12	13	1	8	25	27
Network Management	7	7	0	0	25	26	1	2	29	30
Application Management		3	3			7	7		7	18
Total Outsourcing	60	64	4	7	127	141	15	11	16	17

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

Q

United Kingdom

The estimate of the systems operations market for 1992 has been reduced. The level of market growth during 1992 was lower than forecast. The size of the applications operations sector has been increased and the size of the platform operations sector reduced following a reappraisal of vendors' revenues, as shown in Exhibit D-17.

EXHIBIT D-17

Information Services Market
1993 Forecast Database Reconciliation
United Kingdom, 1992-1997

	1992 Market				1997 Market				1992	1993
USD Millions / Delivery Mode	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	515	480	-35	-7	1,550	1,275	-280	-18	25	22
- Platform Operations	310	270	-40	-13	800	570	-230	-29	21	16
- Application Operations	140	160	20	14	460	550	90	20	27	28
- Desktop Services	65	50	-15	-23	290	155	-135	-47	35	25
Network Management	60	60	0	0	190	190	0	0	26	26
Application Management		25	25			140	140			41
Total Outsourcing	575	565	-10	-2	1,740	1,605	-135	-8	25	23

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

R

Eastern Europe

Exhibit D-18 shows the reconciliation between the 1992 and 1993 forecasts for Eastern Europe.

EXHIBIT D-18

Information Services Market
1993 Forecast Database Reconciliation
Eastern Europe, 1992-1997

USD Millions / Delivery Mode		1992 Market			1997 Market				1992	1993
	1992 Report (Fcst)	1993 Report (Act)	Variance (Amount)	Variance (%)	1992 Report (Fcst)	1993 Report (Fcst)	Variance (Amount)	Variance (%)	Report CAGR (Fcst)	Report CAGR (Fcst)
Systems Operations	6	9	3	50	40	61	21	53	44	47
- Platform Operations	4	5	1	25	20	25	5	25	38	38
- Application Operations	1	3	2	200	15	30	15	100	72	58
- Desktop Services	1	1	0	0	5	6	1	20	38	43
Network Management	2	1	-1	-50	10	5	-5	-50	38	38
Application Management		0	0			0	0			0
Total Outsourcing	8	10	2	25	50	66	16	32	44	46

Because of rounding, data may not add to totals. CAGRs are calculated on pre-rounded values.

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E

Economic Assumptions

Exhibit E-1 shows the exchange rates used to prepare the forecasts in this report.

EXHIBIT E-1

U.S. Dollar and ECU Exchange Rates, 1993

Country	Currency	U.S. Dollar	ECU
Europe	$	1.00	0.790
France	FF	5.26	6.64
Germany	DM	1.55	1.97
United Kingdom	PS	0.634	0.800
Italy	Lira	1,360	1.73
Sweden	Sek	6.24	7.96
Denmark	DK	5.98	7.58
Norway	NK	6.41	8.15
Finland	FM	4.96	6.10
Netherlands	Dfl	1.74	2.20
Belgium	BF	31.91	40.34
Switzerland	SF	1.39	1.75
Austria	Sch	10.89	13.82
Spain	Ptas	110.82	140.30
Ireland	IP	0.589	0.745
Portugal	Esc	138.26	174.00
Greece	Dra	202.32	255.00
Eastern Europe	$	1.00	0.790

Source: OECD December 1992

EXHIBIT E-2

Inflation Assumptions

	Percent		
Country	Assumption 1992-1997	Assumption 1993-1998	Change
France	3.0	2.7	-0.3
Germany	2.7	3.9	1.2
United Kingdom	4.8	3.7	-1.1
Italy	4.4	5.2	0.8
Sweden	6.3	4.0	-2.3
Denmark	2.7	2.4	-0.3
Norway	4.9	3.4	-1.5
Finland	5.0	1.4	-3.6
Netherlands	2.4	3.3	0.9
Belgium	3.3	3.2	-0.1
Switzerland	3.3	3.5	0.2
Austria	2.6	3.2	0.6
Spain	4.7	5.0	0.3
Portugal	8.0	12.5	4.5
Greece	12.0	11.0	-1.0
Ireland	3.0	3.0	0.0
Eastern Europe	-	-	-

Source: OECD December 1992

Report Quality Evaluation

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